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16	NORTHERN DIS	TRICT OF CALIFORNIA
17	SAN FRAN	NCISCO DIVISION
18 19	IN RE: UBER TECHNOLOGIES, INC.,	Case No. 3:23-md-03084-CRB
20	PASSENGER SEXUAL ASSAULT	
21	LITIGATION	DECLARATION OF MAURA R. GROSSMAN J.D., PH.D., IN SUPPORT OF DEFENDANTS
22		UBER TECHNOLOGIES, INC., RASIER, LLC, AND RASIER-CA, LLC'S BRIEF IN
23	This Document Relates to:	SUPPORT OF DEFENDANTS' PROPOSED ESI PROTOCOL
24	ALL ACTIONS	Judge: Hon. Charles R. Breyer
25		Courtroom: 6 – 17th Floor
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#### DECLARATION OF MAURA R. GROSSMAN, J.D., PH.D.

I, Maura R. Grossman, declare as follows:

#### I. Background and Expertise

- 1. I am a Research (Full) Professor in the David R. Cheriton School of Computer Science, cross-appointed to the School of Public Health Sciences, at the University of Waterloo; an Adjunct Professor of Law at Osgoode Hall Law School of York University; and an Affiliate Faculty Member of the Vector Institute of Artificial Intelligence, all in Ontario, Canada. I am also an eDiscovery attorney and consultant at Maura Grossman Law in Buffalo, New York, U.S.A.
- 2. I received my Juris Doctorate (J.D.), *magna cum laude*, *Order of the Coif*, from the Georgetown University Law Center. I also hold masters (M.A.) and doctoral (Ph.D.) degrees from the Derner Institute of Advanced Psychological Studies at Adelphi University, and a Bachelor of Arts (A.B.), *magna cum laude*, with Honors in Psychology, from Brown University.
- 3. Before opening my own law and consulting practice in 2016, I was, for 17 years, a litigator at Wachtell, Lipton, Rosen, and Katz, in New York City. Since 2006, I have focused my practice exclusively on advising lawyers, their clients, and others on legal, technical, and strategic issues involving eDiscovery and information governance. Recently, I have also begun to advise on matters related to the development and use of artificial intelligence.
- 4. I am a globally recognized expert in search and review, and, in particular, technology-assisted review ("TAR") technology, processes, and evaluation. I have personally been involved in hundreds of TAR reviews. In *Rio Tinto v. Vale*, 2015 WL 4367250 (S.D.N.Y. July 15, 2014), where Magistrate Judge Andrew J. Peck appointed me to resolve complex technical disputes in connection with the evaluation of the parties' TAR processes, he referred to me as "one of the most knowledgeable lawyers (if not *the* most knowledgeable lawyer) about TAR." *Id.* at \*1 (emphasis in original).

That sentiment has been consistently echoed in my Chambers & Partners U.S. and Global rankings since 2013, which state, in pertinent part: "There's no one more knowledgeable in the U.S. and Canada, to be honest." (2023); "Maura Grossman is noted for her expertise in predictive coding and [TAR], and her depth of knowledge sees her regularly appointed as a special master.

'She is one of the smartest people in the ESI area and she knows TAR better than anyone else. She is a force to be reckoned with, she is so smart, so insightful, she is constantly looking at how to move the bar forward, and as a result, she is a go-to resource.' 'As one of the innovators of TAR, and a thought leader in the field, she provides unparalleled expertise, and not only is she a capable advocate, but her positions are reasoned and based on proven scientific principles.'" (2021-2022); "Maura Grossman is noted for her expertise in predictive coding and [TAR], with peers reporting: 'She knows more about TAR than anybody in the world.' Her depth of knowledge sees her regularly appointed as a special master. . . . 'Her legal and technical skills and services are superlative.'" (2020); Maura Grossman is widely acknowledged to be one of the most distinguished specialists in predictive coding and is lauded as 'the queen of TAR.' She is routinely appointed as a special master. 'She changed the paradigm and created tools and thinking. She is brilliant." (2019); "Maura Grossman is a recognized leader in TAR work . . . 'She has been a trailblazer and thought leader in the use of artificial intelligence in e-discovery.' She is frequently called upon to act as a special master, mediator, and court-appointed expert, where she attracts praise for her 'encyclopedic knowledge of e-discovery law.'" (2018).

- 5. Since 2011, I have served as a court-appointed master in 18 high-profile, federal and state cases. Those cases are listed in my curriculum vitae ("c.v."), attached hereto as Exhibit A at pages 3-5. Several of those matters have specifically involved developing TAR protocols for the parties, including validation protocols. *See* Special Master's Order on Preliminary Diagnostic Protocol to Assess the Adequacy of Initial Plaintiffs' Original and Supplemental Collections, *BCBSM, Inc. et al. v. Walgreen Co. and Walgreens Boots Alliance, Inc.*, No. 1:20-cv-01853, 2023 WL 6852533 (N.D. Ill. July 21, 2023); Order Regarding Search Methodology for Electronically Stored Information, *In re Broiler Chicken Antitrust Litigation*, No. 1:16-cv-08637, 2018 WL 1146371 (N.D. Ill. Jan. 3, 2018); Stipulation and Order Re: Revised Validation Protocol for the Use of Predictive Coding in Discovery, *Rio Tinto PLC v. Vale S.A.*, No. 14-cv-3042 (RMB) (AJP) (S.D.N.Y, Sept 8, 2015) [ECF. 338].
- 6. My research on TAR methods and validation, along with University of Waterloo Computer Science Professor Gordon V. Cormack, has been cited approvingly in many federal and

state cases, beginning with *Da Silva Moore v. Publicis Groupe*, 287 F.R.D. 182, 190 (S.D.N.Y. 2012). Most notably, our seminal study, *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review*, 17 Rich. J.L. & Tech. 11 (2011), has been widely cited in case law, both in the U.S. and abroad. Published case citations to my work are indicated on my c.v. at pages 19-22 and 24. My TAR research has been funded by 12 grants and fellowships, including from the Ontario Research Fund, the Canadian Foundation for Innovation, and the National Sciences and Engineering Research Council of Canada. I have authored 54 refereed and/or peer-reviewed papers; 27 books, book chapters, and/or journal articles; and 59 other papers, including many specifically addressing TAR processes and evaluation. Those are listed on my c.v. at pages 14-31.

- 7. Since 2010, I have taught more than a dozen courses on electronic discovery at Columbia Law School, Georgetown University Law Center, Pace University Law School, and Rutgers Law School—Newark. Since 2008, I have delivered over 1,000 talks, primarily on eDiscovery-related topics, many of which have included TAR and many of which have been educational programs for federal and state judges, by invitation of the court. A complete list of my speaking engagements appears at pages 31-110 of my c.v.
- 8. I have been retained by Uber Technologies, Inc. ("Uber") in the above-captioned litigation, as well as in the related litigation, *In re Uber Rideshare Cases*, Case No. CJC-21-005188 (S.F. Super. Ct.) (the "JCCP Action"), to serve as a consultant on TAR-related issues, particularly as relates to the development and implementation of an ESI protocol in these matters.
- 9. I submit this declaration on behalf of Uber in support of the positions it has taken in its Brief in Support of Defendants' Proposed ESI Protocol. I am generally familiar with the proceedings and the issues relating to TAR process and validation that have been raised in this dispute (and in similar disputes in the JCCP Action) and have been privy to the correspondence and draft ESI protocols exchanged between the parties in both proceedings. I have personal knowledge of the matters set forth herein, and if called upon and sworn as an expert witness, I could and would competently testify thereto.

#### II. Use of Search Terms Before TAR

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- 10. It is not uncommon for a responding party to use search terms to reduce the population of documents to be reviewed using TAR. In large, complex cases, such as this one, the number of documents collected can number in the tens of millions. I have been advised that Uber has already collected nearly 21 million emails from 46 proposed custodians in the JCCP Action. I am further aware that Uber applied the search terms provided by the plaintiffs in the JCCP Action to that collection, and those search terms hit on approximately 3.5 million documents after deduplication. As a result, it is both reasonable and proportionate in this case, as in many cases where a party uses TAR, to use broad search terms to reduce the document population to be ingested into TAR to a manageable size—which still numbers in the millions.
- 11. I am familiar with the case law addressing whether search terms may be applied before TAR, and it would be fair to say that the vast majority of courts to have addressed this issue have permitted the use of search terms before TAR, including in cases where the issue was disputed, as it is here. See, e.g., Huntsman v. Sw. Airlines Co., No. 19-CV-00083-PJH, 2021 WL 3504154, at \*3 (N.D. Cal. Aug. 10, 2021) ("[The defendant's] approach to using keyword searches and technology-assisted review in tandem does not offend the court's expectation that the parties conduct a reasonable inquiry as required by the rules."); Maurer v. Sysco Albany, LLC, No. 1:19-CV-821 (TJM/CFH), 2021 WL 2154144, at \*8 (N.D.N.Y. May 27, 2021) (finding "reasonable the defendants' proposed use of a general search-term-based search of the custodian accounts . . . to be followed by a second level of review using predictive coding"); Livingston v. City of Chicago, No. 16 CV 10156, 2020 WL 5253848, at \*3 (N.D. Ill. Sept. 3, 2020) (holding that pre-TAR culling with search terms "satisfies the reasonable inquiry standard and is proportional to the needs of this case under the federal rules"); In re Biomet M2a Magnum Hip Implant Prod. Liab. Litig., No. 3:12-MD-2391, 2013 WL 1729682, at \*2-3 (N.D. Ind. Apr. 18, 2013) (concluding, in an MDL, that use of pre-TAR search term culling was appropriate and satisfied the defendant's discovery obligations under Rule 26 of the Federal Rules of Civil Procedure).
- 12. I have also seen examples of stipulated ESI protocols where the parties have agreed to this. For example, in *In re Google Digital Advertising Antitrust Litigation*, the Court approved

terms must meet and confer with the receiving party before using this method to collect and review documents and prior to negotiation of search terms." Order Regarding Discovery Procedure at 6, No. 21-md-3010 (PKC) (S.D.NY. Mar. 17, 2023), ECF 508. In *Tecku v. Yieldstreet*, the Court approved an ESI protocol that stated: if "a Producing Party elects to use TAR to cull documents from the set of documents identified by search terms or other methods, the Producing Party shall disclose the TAR software that will be used, as well as whether a TAR 1.0 or TAR 2.0 (CAL) workflow will be implemented." ESI Plan and Order at 12-13, No. 1:20-cv-07327 (S.D.N.Y. Dec. 20, 2022), ECF 81. And just a few weeks ago, in *Penman v. Hess Bakken Investments II, LLC*, the Court again approved an ESI protocol that required the responding party to only disclose its use of search terms. Electronically Stored Information Protocol at 5, No. 1:22-cv-00097-DLH-CRH (D.N.D. Feb 2, 2024), ECF 36.

an ESI protocol that stated: "a producing party that wishes to use TAR in combination with search

13. To be clear, there are situations where I might consider the use of search terms before the application of TAR to be inappropriate, but those situations are distinguishable from the present case. For instance, it would likely be inappropriate for a producing party to unilaterally apply narrow search terms that would excessively cull the population of documents to be reviewed using TAR. However, that is not the case here, where Uber has agreed, in its proposed ESI protocol, to negotiate with Plaintiffs broad search terms that would help to reduce the population of documents to be reviewed to a manageable number by eliminating documents that are nonresponsive. Uber's agreement to negotiate these terms with Plaintiffs should reduce any concern that the search terms to be applied would be too narrow or specific, thereby excessively culling the document population. Uber's agreement to negotiate in good faith a broad set of search terms with Plaintiffs should adequately satisfy its discovery obligations.

#### III. Plaintiffs' Review and Coding of Documents During the TAR Process

14. Plaintiffs have proposed provisions of the ESI protocol that would permit Plaintiffs to be extensively involved in the process of reviewing and coding documents during a proposed initial stage of training the TAR model and again during the validation process. Plaintiffs' request

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is not only unwarranted, but also uncommon among modern ESI protocols where a party uses TAR 2.0.

- 15. Uber has stated that it intends to use Relativity's version of continuous active learning ("CAL"), which is a TAR 2.0 model that operates by continuously learning from past coding decisions by human reviewers to more efficiently prioritize the next documents that human reviewers should review. While historically, there have been some ESI protocols where parties have agreed that the requesting party would be involved in the process of training or validating the responding party's TAR model, I am not aware of any case where the responding party intended to use a TAR 2.0 model, applying CAL, and the court ordered the responding party, over its objection, to allow the requesting party to be involved in the coding of training documents. And in the rare cases where a requesting party has been permitted to review non-responsive documents, the cases have typically involved situations where the responding party's TAR process has already been found deficient in some respect—which obviously has not happened here.
- 16. Plaintiffs' proposed involvement in training the TAR model is unnecessary and inconsistent with how a TAR 2.0 process operates. I have been advised that Plaintiffs indicated, during the meet and confer process, that they want to be involved in coding a "training" set to ensure that Uber's TAR process begins efficiently, and to ensure the parties have a common understanding of the relevance of documents. But efficiency is Uber's concern, not Plaintiffs', and Uber has no incentive to implement an inefficient TAR process that will increase its own review burden and cost. I further understand that Plaintiffs seem to assume that Uber's TAR model can be fully trained at the outset, and that such training will increase the TAR model's understanding of what documents the model believes are responsive and should be prioritized for human review. But the whole point of TAR 2.0, including Relativity's version of CAL, is that the model continuously improves over time with the review of each and every document in the collection. But taking Plaintiffs' logic to the extreme, they should be involved in the entire review process from start to finish, an intrusion in the review process that would be unprecedented. Because the CAL model is constantly learning—unlike TAR 1.0, where some parties have implemented Plaintiffs' proposed training method—there is no fixed training phase where the model categorizes or

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306 F.R.D. 125, 128 (S.D.N.Y. 2015) ("If the TAR methodology uses 'continuous active learning' (CAL) (as opposed to simple passive learning (SPL) or simple active learning (SAL)), the contents of the seed set is much less significant."). As a result, Plaintiffs' stated rationale of helping to train the TAR model is fundamentally inapposite to how Uber's TAR model will function. 17. Moreover, I have personally conducted studies that establish that a TAR 2.0

prioritizes all of the documents for human review. In fact, at least one court has recognized that a

seed or sample set is less significant for a TAR model using CAL. See Rio Tinto PLC v. Vale S.A.,

- process's ability to identify relevant documents (i.e., recall) is not impacted by how the TAR 2.0 process begins. See Gordon V. Cormack & Maura R. Grossman, "Autonomy and Reliability of Continuous Active Learning for Technology-Assisted Review," arXiv.org (Apr. 26, 2015), https://arxiv.org/pdf/1504.06868.pdf.
- 18. Plaintiffs' proposed ESI protocol would also permit Plaintiffs to review all nonprivileged documents in the sample of documents that Uber will generate to validate its TAR process (i.e., the "validation sample"), but this too is uncommon in recent ESI protocols involving a TAR 2.0 process, other than in situations readily distinguishable from this case. See, e.g., Progressive Casualty Ins. Co. v. Delaney, No. 2:11-cv-00678-LRH-PAS, 2014 WL 3563467, at \*2 (D. Nev. Jul. 18, 2014); Valsartan, Losartan & Irbesartan Prods. Liability Litig., 337 F.R.D. 610, 614 (D.N.J. 2020).
- 19. In my experience, most recent ESI protocols involving TAR 2.0 do not contain provisions that would permit the level of involvement in validation that Plaintiffs are seeking here. See, e.g., ESI Protocol at 4-5, Penman, No. 1:22-cv-00097, ECF No. 36 (ordering with regard to TAR that the producing party need only "disclose such intent to use TAR to the Receiving Party in advance of its use"); Order Regarding Discovery Procedure at 6, Google Digit., No. 21-md-3010 (PKC) (S.D.NY. Mar. 17, 2023), ECF 508; ESI Plan and Order at 12-13, *Tecku*, No. 1:20-cv-07327 (S.D.N.Y. Dec. 20, 2022), ECF 81.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> I understand that, during negotiations, Plaintiffs have cited two examples where plaintiffs were purportedly involved in a defendant's TAR process. In Plaintiffs' first example, *In re Volkswagen* 'Clean Diesel' Marketing, Sales Practices, and Products Liability Litigation, MDL No. 2672 CRB (JSC) (N.D. Cal. Nov. 7, 2016), ECF No. 2173, the protocol—entered 8 years ago—was based on

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## 20. Moreover, courts have recognized that a requesting party can properly verify a TAR 2.0 process based on the types of disclosures that Uber has agreed to provide here, instead of examining Uber's coding of the validation set. See, e.g., Rio Tinto, 306 F.R.D. at 128-29 (stating "requesting parties can insure that training and review was done appropriately by other means, such as statistical estimation of recall at the conclusion of the review").

#### IV. **Process for Validating TAR Model**

- 21. I have consulted with Uber and its counsel to assist them in developing a reasonable, statistically sound, and efficient TAR workflow and validation process in this matter. Per my suggestion, Uber intends to continue its TAR review until its marginal precision indicates that its review is complete, and this indication is subsequently confirmed by validation testing that is superior to Relativity's "Elusion with Recall" Test, which Plaintiffs have proposed. Together, these two steps will provide a high degree of confidence that Uber's TAR production is substantially complete, and if not, the nature of any responsive documents that may have been missed.
- 22. Once Uber's marginal precision falls below 10% for two consecutive review batches, Uber intends to suspend the review and conduct validation testing to confirm that the production is adequate. Empirical evidence shows that using marginal precision as a TAR stopping criterion is a reliable indicator of completeness. See Gordon V. Cormack & Maura R. Grossman, Multi-Faceted Recall of Continuous Active Learning for Technology Assisted Review, SIGIR '15, Aug. 2015, at 765.
- 23. Plaintiffs have proposed to modify Uber's stopping criteria by requiring Uber to measure marginal precision based on two or more batches that total at least 1,000 documents. Plaintiffs' stated rationale for this 1,000-document criterion is that it is possible for some batches to contain documents that fall in the same strata of likely unresponsiveness, but subsequent batches

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an antiquated TAR 1.0 methodology. That workflow includes a discrete training phase, unlike TAR 2.0, which Uber intends to use in this case and which uses continuous active learning. Plaintiffs have also cited the protocol in In re 3M Combat Arms Earplug Products Liability Litigation, MDL No. 02885 (N.D. Fla. July 1, 2019), ECF No. 472, but the parties in that case, as in In re Volkswagen, appear to have consented to the requesting party's involvement in coding responsive documents as part of the TAR process. Uber does not.

may contain a greater proportion of responsive documents. This concern is addressed by requiring that the marginal precision be below the 10% threshold for two consecutive batches which, by virtue of the TAR 2.0 process, will necessarily be separated by retraining. If the non-responsive documents in the first low-precision batch were similar to one another, they should be excluded from the next batch by re-training. In my experience, Plaintiffs' concerns are not a sound basis for requiring marginal precision to be measured over at least 1,000 documents. There is no principled basis for Plaintiffs' proposal to measure the stopping criteria using 1,000 documents (which would correspond to *five* batches in the Relativity system), as opposed to Uber's proposal of measuring the stopping criteria from two "reasonably sized" batches. Regardless, Plaintiffs' concerns about Uber overlooking potentially responsive documents will be addressed by the validation process. If the validation test results in an insufficient recall rate or unearths novel or important documents, then Uber will then continue reviewing documents with TAR until an adequate result is achieved.

- 24. The validation testing detailed below will allow statistics, such as recall and prevalence, to be estimated directly. Uber intends for the validation test to proceed as follows.
  - a. A statistically valid sample consisting of three strata will be drawn from the entire TAR population. 500 documents will be drawn, at random, from documents coded responsive prior to validation; 500 documents will be drawn, at random, from documents coded nonresponsive prior to validation; and 2,000 documents will be drawn, at random, from documents not coded prior to validation (*i.e.*, the null set). This will ensure an estimate of Richness with a margin of error no larger than 2.1% at 95% confidence, and almost certainly, much smaller. As for all statistical estimates, the precise margin of error can only be known after the sample is reviewed.
  - b. The 3,000 documents will be reviewed *de novo* for responsiveness, interleaved in random order, with no indication to the reviewer of their prior coding status.
  - c. Recall and prevalence will be calculated using the following quantities:
    - i. the number of documents in the TAR population that were coded responsive prior to validation;

- ii. the number of documents sampled from (i) that are coded responsive in the *de novo* review;
- iii. the number of documents in the TAR population that were coded nonresponsive prior to validation;
- iv. the number of documents sampled from (iii) that are coded responsive in the *de novo* review;
- v. the number of responsive documents in the TAR population that were not coded prior to validation; and,
- vi. the number of documents from (v) that are coded responsive in the *de* novo review.
- d. Recall =  $[(i) \div 500 \times (ii)] \div [(i) \div 500 \times (ii) + (iii) \div 500 \times (iv) + (v) \div 2000 \times (vi)]$
- e. Prevalence =  $[(i) \div 500 \times (ii) + (iii) \div 500 \times (iv) + (v) \div 2000 \times (vi)] \div [(i) + (iii) + (v)]$
- 25. This validation protocol is precisely the same as the validation protocol I ordered as the Special Master in *In re Broiler Chicken Antitrust Litigation*, No. 1:16-CV-08637, 2018 WL 1146371 (N.D. Ill. Jan. 3, 2018) (hereinafter "*Broilers*"). Attached as Exhibit B to this declaration is the validation protocol from *Broilers*: the Order Regarding Search Methodology for ESI. It is superior to Relativity's "Elusion with Recall" because, although both tests rely on a statistical sample of the entire TAR population (not just the null set), they differ in that *Broilers* uses a stratified sample to include a larger number of previously coded documents and uses a blind *de novo* review of all documents in the sample, regardless of their previous coding. Both of these differences are necessary to ensure that the validation coding for all documents—whether previously reviewed or not—is truly independent of the prior review process.
- 26. When independent reviews of the same document set are conducted, it is well established that there will be coding differences between the two reviews. This is not to say that one of the reviews is necessarily right and the other necessarily wrong; it merely indicates that a certain percentage of documents—typically 30% or more—that one subject matter expert deems responsive will be deemed nonresponsive by a second equally qualified subject matter expert. For this reason, 70% recall is the best one might reasonably expect, when recall is calculated based on

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an independent review, such as the one in the Broilers protocol that Uber is proposing here. If the recall estimate approaches or exceeds this value, one can say with confidence that the review has found as many responsive documents as could reasonably be expected. If the recall estimate falls substantially short of this value, it is necessary to investigate why. The answer may be to continue TAR review, to conduct targeted searches, or to revisit some or all of the TAR coding or the *de novo* coding.

- 27. Plaintiff's proposal to require 80% recall is unreasonable when recall is measured independently as has been proposed by Uber. It is well established in information retrieval science that "The scores for the two sets of secondary judgments imply a practical upper bound on retrieval system performance is 65% precision at 65% recall since that is the level at which humans agree with one another." Ellen M. Voorhees, Variations in Relevance Judgments and the Measurement of Retrieval Effectiveness, Info. Processing Mgmt. 36 & 697 (Sept. 2000), https://www.sciencedirect.com/science/article/abs/pii/S0306457300000108. In my 2011 paper with Gordon V. Cormack indicating the superiority of TAR over manual review, TAR exceeded 80% for only one of five production requests; manual review did not achieve 80% for any of the production requests and achieved inferior recall to TAR for four of the five production requests. Maura R. Grossman & Gordon V. Cormack, Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review, 17 Richmond J. L.& Tech. 1, 48 (2011). An acceptance standard of 80% recall—as measured independently as Uber has proposed—would likely be unachievable, either by TAR or by exhaustive manual review. Indeed, the TAR protocols I have previously ordered as a special master have typically used 70% recall as the presumed recall target when validation has been performed independently.
- 28. Reported recall values exceeding 80% are generally achieved only when the validation process is not independent, *i.e.*, is influenced by the review process, akin to a student grading their own exam. When reviewers are aware that the documents in the null set they are reviewing are presumptively non-responsive (as is the case in Elusion testing), the resulting recall estimate is substantially inflated by that knowledge, including both the assumption that the prior manual coding is infallible and that the documents have already been excluded by TAR. For these

 reasons, an unbiased estimate of recall can be achieved only through a blind review that includes examples of all coded and uncoded documents, as Uber proposes here. Under this methodology, 70% is a good result, but whether 70% is or is not achieved, the validation sample gives qualitative insight into the nature of documents that might not have been found by the TAR process, their import, and possible remediation strategies, if applicable.

- 29. Uber's proposed validation test does not depend on a "cutoff" value as required by Relativity's "Elusion with Recall" Test. The pertinent distinction is not whether a document falls above or below an arbitrary "cutoff" value, but rather, whether the document has been coded responsive, coded nonresponsive, or not coded at all. A valid statistical sample will capture each of these categories of documents and will allow direct estimation of how many responsive documents there are overall, and how many of these were presented for review by the TAR system prior to validation.
- 30. According to Relativity, "cutoff" is "the rank which divides positive and negative predictions, such as 'relevant' and 'not relevant.' The cutoff is used throughout Active Learning and factors heavily into the validation statistics. Note: When you update the rank cutoff value, the value is updated in all three places where it's used in the application: Project Validation, Update Ranks, and Project Settings." Relativity, Assisted Review Active Learning Guide at 44-45 (Nov. 2023), https://help.relativity.com/PDFDownloads/Server2022\_PDF/Relativity%20-%20Assisted %20Review%20Active%20Learning%20Guide.pdf (emphasis added).

Relativity's use of a "cutoff" value appears to be predicated on the assumption that RAL will be used to review only a subset of the potentially responsive documents, and then to "predict" that all further documents with scores above the "cutoff" are responsive. Uber's protocol relies on no such assumption because all documents that are candidates for production will have been reviewed.

31. Relativity's "Elusion with Recall" Test is merely one way to conduct validation. As explained, the validation test that Uber intends to employ is more straightforward, statistically superior, and unbiased.

- 32. Even though Uber is using Relativity Active Learning, there is no reason that Uber cannot conduct validation using methods other than—indeed superior to—those suggested by Relativity. That is particularly warranted here, where Relativity's "Elusion with Recall" Test assumes a workflow that differs from the one Uber will use and introduces uncorrectable bias because previously coded documents are excluded from *de novo* review during validation.
- 33. The combination of the marginal precision stopping criterion and the *Broilers* validation test provide substantially more insight into the quality of the TAR review than what Plaintiffs have proposed. Uber's method is unbiased and empirically validated; Relativity's "Elusion with Recall" Test is neither.
- 34. Uber's intended stopping criterion and validation process follow objective and well-established processes for terminating and validating a TAR 2.0 process. By following the validation steps outlined above, Uber will be able to accurately confirm that it has made an adequate production. That is all that is required.

#### V. Reassessment & End-to-End Validation

- 35. I understand that Plaintiffs have proposed two provisions that would expand the validation process set forth above. First, a provision requiring validation of the recall rate of Uber's TAR process including the application of search terms, TAR, and the manual review of documents. Second, a provision that provides that Uber, Plaintiffs, or the Court may "reassess" Uber's search methodology or validation process. Plaintiffs' additions are unnecessary for several reasons.
- 36. The prescribed validation testing should be the sole process for verifying that Uber's TAR process was effective. The validation process set forth above is unbiased and empirically validated, and it will accurately measure whether or not Uber's TAR process did or did not achieve an adequate recall rate, and whether it missed substantial numbers of unique and important documents. If the recall rate is deemed unsatisfactory, the TAR process will continue. Uber will then determine whether it would be appropriate to conduct further TAR review, or conduct targeted searches, until it is satisfied with the recall rate achieved.
- 37. To the extent the Plaintiffs wish to maintain their rights to raise with the Court a perceived deficiency with Uber's TAR process, the Parties have already agreed to include language

in the ESI Protocol that makes clear the Parties may seek the Court's intervention related to such issues. Ultimately, Plaintiffs' "reassessment" period is unnecessary because, if Uber's TAR process does not achieve an adequate recall rate, or if unique or important documents are discovered during the validation process, Uber will continue its TAR process until an adequate production is achieved. Plaintiffs retain the right to raise a material deficiency with the production.

38. Separately, end-to-end validation is unnecessary in this case for two reasons. First, to the extent Plaintiffs seek to validate Uber's use of search terms before TAR, that concern is obviated by the fact that Uber has agreed to negotiate broad search terms with Plaintiffs. Put simply, Uber is not unilaterally imposing a narrow set of search terms. In my experience, it is more efficient once the parties resolve their negotiations on search terms, that they should move on. Subsequent validation of fully agreed-upon search terms is generally unnecessary unless there is some reason to believe the search terms will be ineffective. Second, Plaintiffs' proposal for "reassessment," introduces unnecessary uncertainty and inefficiency. The validation process detailed above is objective and well-established in prior cases where parties have come to agreement on search terms; it does not require a "reassessment."

#### VI. TAR Disclosures

- 39. Based on my experience and my review of the types of disclosures regarding TAR processes that parties typically make, I believe that Uber has agreed to disclosures that are reasonable, standard, and typical in TAR productions, if not generous. They are appropriately transparent as to various aspects of their TAR process and to demonstrate the adequacy of their production. In particular, Uber's agreed-to disclosures are sufficient to provide a requesting party with information to independently analyze the validation testing Uber has performed.
- 40. In addition to the recall and prevalence metrics, Uber intends to provide Plaintiffs with quantities listed in paragraph 24(c)(i) through 24(c)(vi) above, from which one can easily compute these and many other summary statistics.
- 41. Courts have repeatedly recognized that the types of disclosures Uber has offered to provide are sufficient to offer transparency into the TAR process, absent a showing of a material deficiency in the production.

# **EXHIBIT** A

### Curriculum Vitae MAURA R. GROSSMAN, J.D., PH.D.

229 Corrie Crescent • Waterloo, ON N2L 5W3 Canada •
 519-888-4567, ext. 37522 • maura.grossman@uwaterloo.ca •

#### **EDUCATION**

## Georgetown University Law Center

Washington, DC

Juris Doctor, magna cum laude

1999

Honors and Awards: Order of the Coif

Dean's List (1L, 2L & 3L)

Executive Notes & Comments Editor of *The Georgetown Law Journal* CALI Excellence for the Future Awards (Top Student) in Negotiations

Seminar & in The Legal Profession Seminar (Both 3L)

Gewirz Resident Fellow (2L & 3L)

Honors in Legal Research and Writing (1L)

New York University Postdoctoral Certificate in Psychotherapy & Psychoanalysis	New York, NY 1990
North Shore University Hospital / Cornell University Medical College Postdoctoral Fellowship in Child and Adolescent Psychiatry Doctoral Internship in Adult Psychiatry	Manhasset, NY 1984-1985 1983-1984
Gordon F. Derner Institute of Advanced Psychological Studies / Adelphi University  Doctor of Philosophy in Clinical / School Psychology  Master of Arts in Psychology	Garden City, NY 1984 1982

Honors and Awards: Honorable Mention, New York State Psychological Association
 Annual Paper Competition

Brown University

Bachelor of Arts, magna cum laude, with Honors in Psychology

Providence, RI
1980

Honors and Awards: Brown University Undergraduate Teaching Fellowships
 National Science Foundation Undergraduate Research
 Fellowship

#### **CURRENT EMPLOYMENT**

David R. Cheriton School of Computer Science, University of Waterloo	Waterloo, ON
Research (Full) Professor	2016-Present
Director of Women in Computer Science	2019-2020
Cross Appointment to the School of Public Health Sciences	2023–Present

#### Osgoode Hall Law School, York University

Adjunct Professor of Law Toronto, ON 2017–Present

Honors and Awards: 2020 Faculty Teaching Award

Maura Grossman Law **Principal**  Buffalo, NY 2016–Present

Honors and Awards: Recipient of the 2021 Shira Scheindlin Lifetime Achievement
Award, Zapproved Corporate Ediscovery Hero Awards
Awarded the eDiscovery Specialist ("CEDS") credential by
the Association of Certified eDiscovery Specialists
("ACEDS") (received the highest score on the qualifying
exam in the ten-year history of the organization)

#### **GRANTS & FELLOWSHIPS**

- 1. Recipient of an Officer of the Privacy Commissioner ("OPC") of Canada Contributions Grant titled *A Pan-Canadian Data Governance Framework for Health Synthetic Data*, as Co-Principal Investigator, in the total amount of \$48,875 CAD (2023-2024).
- 2. Recipient of a University of Waterloo Joint Cybersecurity and Privacy Institute ("CPI") and AI Institute Seed Grant titled *A Feasibility Study of Synthetic Health Data's Privacy, Utility, and Value*, as Co-Principal Investigator, in the total amount of \$20,000 CAD (2023-2024).
- 3. Recipient of a University of Waterloo Learning Innovation and Teaching Enhancement ("LITE") Seed Grant titled *An Investigation into Online Versus Face-to-Face Instruction Approaches to Interdisciplinary Learning About Discrimination in Technology*, as Co-Principal Investigator, in the total amount of \$7,500 CAD (2023-2024).
- 4. Recipient of a University of Waterloo Cybersecurity and Privacy Institute ("CPI") Seed Grant titled *Understanding the Relationship Between Human Error and Cybercrime in Hybrid/Remote Work*, as Co-Principal Investigator, in the total amount of \$10,000 CAD (2022-2023).
- 5. Recipient of a Waterloo Cybersecurity and Privacy Institute ("CPI") Seed Grant titled *Pathways for Black Youth to Careers in Cybersecurity and Computer Science*, as Principal Investigator, in the total amount of \$10,000 CAD (2022-2023).
- 6. Recipient of an Ontario Research Fund Research Infrastructure ("ORF-RI") Grant titled *Expediting Knowledge Synthesis Using Artificial Intelligence CAL®-Synthesi.SR Dashboard*, as a Collaborator, in the total amount of \$148,685 CAD (2022-2027).
- 7. Recipient of a World Health Organization ("WHO") Health Emergencies ("WHE") Programme Grant for *Infection Prevention and Control Ebola Virus Disease Guidance Development: Literature Review and Evidence Synthesis*, as a Co-Investigator, in the total amount of \$192,102.95 CAD (2022).
- 8. Recipient of a Canada Foundation for Innovation John R. Evans Leaders Fund ("CFI-JELF") Funding for Research Infrastructure Grant titled *Expediting Knowledge Synthesis Using Artificial Intelligence CAL®-Synthesi.SR Dashboard*, as a Collaborator, in the total amount of \$148,685 CAD (2022-2027).
- 9. Recipient of Natural Sciences and Engineering Research Council of Canada ("NSERC") Collaborative Research and Training Experience ("CREATE") Program Grant titled *NSERC CREATE in Responsible Development of AI ("RAI")*, as a Co-Principal Investigator ("Co-PI"), in the total amount of \$1,650,000 CAD, with \$118,000 CAD total per Co-PI over six years (2021–2027), plus additional matched funds from the David R. Cheriton School of Computer Science and the Faculty of Mathematics at the University of Waterloo

- of up to \$150,000 CAD over six years (2021–2027).
- 10. Recipient of Wes Graham Faculty Research Fellowship in the amount of \$12,500 CAD per year (2020–2023).
- 11. Recipient of Natural Sciences and Engineering Research Council of Canada ("NSERC") PromoScience Grant in the amount of \$90,000 CAD for *Girls Mean Business* (2020–2021).
- 12. Recipient of Clifford Grant for eDiscovery Law in the amount of \$20,000 USD per year (2020–2023).
- 13. Recipient of David R. Cheriton School of Computer Science Faculty Start-Up / Operating Grant in the amount of \$10,000 CAD per year (2019–2022).
- 14. Recipient of Management Grant in the amount of \$35,000 CAD for *Apparatus for High-Recall Information Retrieval* (2018).
- 15. Recipient of Natural Sciences and Engineering Research Council of Canada ("NSERC") Discovery Grant in the amount of \$20,000 CAD per year (plus \$3,200 CAD COVID-19 supplement for 2020) for *Evaluation of High-Recall Human-in-the-Loop Information Retrieval Technologies* (2017–2023).
- 16. Recipient of Ontario Research Fund Research Infrastructure ("ORF-RI") Grant in the amount of \$67,832 for *Apparatus for High-Recall Information Retrieval* (2017-2022).
- 17. Recipient of Canadian Foundation for Innovation John R. Evans Leaders Fund ("CFI-JELF") Funding for Research Infrastructure Grant in the amount of \$67,832 CAD for *Apparatus for High-Recall Information Retrieval* (2017-2022).
- 18. Consultant on National Science Foundation Information and Intelligent Systems ("NSF IIS") Program Grant No. 065250, *Development and Evaluation of Search Technology for Discovery in Civil Litigation* (2011–2017).
- 19. Principal Investigator on National Institutes of Health ("NIH") Center for Substance Abuse Prevention ("CSAP") Grant in the amount of \$1,000,000 USD per year for *Project Step Ahead* (1991-1993).

#### SPECIAL MASTER APPOINTMENTS

- 1. Craigsville Tel. Co. d/b/a Adamswells et al. v. T-Mobile USA, Inc., Case No. 19-cv-7190 (N.D. Ill. 2023).
- BCBSM, Inc., et al. v. Walgreen Co. and Walgreens Boots Alliance, Inc., Case No. 1:20-cv-01853 (N.D. Ill. (Consol. with Civ. Ac. Nos. 1:20-cv-04738, 1:20-cv-03332, 1:20-cv01929, 1:20-cv-04940, and 1:20-cv-01362 (N.D. Ill. 2023).
  - Issued Special Master's Order on Preliminary Diagnostic Protocol to Assess the Adequacy of Initial Plaintiffs' Original and Supplemental Collections, 2023 WL 6852533 (N.D. Ill. July 21, 2023).
- 3. A.F. Moore & Associates, Inc., et al. v. Maria Pappas, Cook County Treasurer and Ex Officio County Collector, et al., Civ. Ac. No. 1:18-cv-04888 (N.D. Ill, 2023).

- 4. In Re: Blackbaud, Inc., Customer Data Breach Litigation, Case No. 3:20-mn-02972-JMC, MDL No. 2972 (D. S.C., 2021).
- 5. Cherry Creek Mortgage, LLC v. Thomas R. Jarboe, Civ. Ac. No. 18-cv-00462-KLM (D. Colo. 2021).
- 6. United States ex Rel. Jarboe v. Cherry Creek Mortgage Co., Inc., Civ. Ac. 19-cv-01529-CMA-KLM (D. Colo. 2020).
- 7. Genscape Inc. v. Live Power Intelligence Company NA LLC, Civ. Ac. No. 18-cv-02525-DDD-KLM (D. Colo. 2020).
- 8. ABN AMRO Capital USA LLC v. AMMERA Capital Management, LLC, Index No. 651148/2019 (N.Y. Sup. Ct. I.A.S. Part 48 2019).
- 9. United States v. Farouki, Crim. No. 18-cr-00346-PLF (D.D.C. 2019).
- 10. McNees v. Ocwen Loan Servicing, LLC, Civ. Ac. No. 16-cv-01055-WJM-KLM (D. Colo. 2019).
- 11. Vista Partners v. BrainScope Company, Civ. Ac. No. 19-cv-00138-CMA-SKC (D. Colo. 2019).
- 12. MAO-MSO Recovery II v. GEICO, Civ. Ac. Nos. 17-cv-711-PWG and 17-cv-964-PWG (D. Md. 2019).
- 13. Gilbert v. United States Olympic Committee, Civ. Ac. No. 18-cv-00981-CMA-MEH (D. Colo. 2018).
- 14. Airquip v. HomeAdvisor, Civ. Ac. No. 1:16-cv-01849-PAB-KLM (D. Colo. 2018).
  - Issued Master's Memorandum Opinion and Order on HomeAdvisor, Inc., IAC/InterActiveCorp., Angi Homeservices, Inc., and CraftJack Inc.'s Motion for Sanctions, 2023 WL 196414 (D. Colo. Jan. 16, 2023).
    - Cited in Order in *In re HomeAdvisor, Incl Litigation*, Civ. Case No. 16-cv-01849-PAB-KAS (Consolidated with Civ. Ac. No. 18-cv-01802-PAB-KAS), 2024 WL 115126 (D. Colo. Jan. 10, 2024).
- 15. Murphy v. Lowe's Home Centers, LLC, Civ. Ac. No. 1:17-cv-01720-REB-KLM (D. Colo. 2018).
- 16. *United States of America* v. *Michael Cohen*, Crim. Ac. No. 1:18-cr-00602-WHP (S.D.N.Y. 2018) (recommended to the Court by the prosecution).
  - Submission to the Court available at <a href="https://archive.org/stream/Michael-Cohen-Court-Documents/2018-04-26-Cohen-28">https://archive.org/stream/Michael-Cohen-Court-Documents/2018-04-26-Cohen-28</a> djvu.txt.
  - Discussed in Special Master Could Play a Big Role in Trump Lawyer Doc Review, Bloomberg News (Apr. 18, 2018), available at <a href="https://news.bloomberglaw.com/e-discovery-and-legal-tech/special-master-could-play-big-role-in-trump-lawyer-doc-review">https://news.bloomberglaw.com/e-discovery-and-legal-tech/special-master-could-play-big-role-in-trump-lawyer-doc-review</a>.
- 17. In re Broiler Chicken Antitrust Litigation, No. 16 Civ. 08637 (N.D. Ill. 2017).
  - Issued Order Regarding Search Methodology for Electronically Stored Information, 2018 WL 1146371 (N.D. Ill. Jan 3, 2018).
- 18. Rio Tinto PLC v. Vale S.A., No. 14 Civ. 3042 (RMB) (AJP) (S.D.N.Y. 2015).

- Discussed by the Court in *Rio Tinto PLC* v. *Vale, S.A.*, 2015 WL 436720 (S.D.N.Y. July 15, 2015) ("Ms. Grossman is one of the most knowledgeable lawyers (if not *the* most knowledgeable lawyer) about TAR […]").
- Issued Stipulation and Order Re: Revised Validation and Audit Protocol for the Use of Predictive Coding in Discovery, Case No. 14-cv-3042 (RMB) (AJP) (S.D.N.Y. Sept. 8, 2015) [Dkt. No. 338].
- 19. National Day Labor Organizing Network v. U.S. Immigration and Customs Enforcement Agency, No. 10 Civ. 3488 (S.D.N.Y. 2011).

#### **EXPERT ENGAGEMENTS**

- Uber Rideshare Cases, Case No. CJC-21-5188 (Cal. Sup. Ct. S.F. Cty. 2023).
- In re Kraft-Heinz Securities Litigation, Case No. 1-19-cv-01339 (N.D. Ill. 2022).
- In the Matter of the Arbitration Between General Re Life Corporation v. American General Life Insurance Company and General Re Life Corporation v. American General Life Insurance Company et al. (New York, N.Y. 2022).
- In re DPP Beef Litigation, Case No. 20-cv-1319 (JRT/HB) (D. Minn. 2022).
- In re Diisocyanates Antitrust Litigation, Case No. 2:18-mc-010001-DWA, MDL. No. 2862 (W.D. Pa. 2021).
  - Referenced by the Court in *In re Diisocyanates Antitrust Litigation*, 2022 WL 17668470 (W.D. Pa. Oct. 19, 2022).
  - Referenced by the Court in *In re Diisocyanates Antitrust Litigation*, 2021 WL 4295729 (W.D. Pa. Aug. 23, 2021).
- In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation, Case No. 1:19-md-02875-RBK-JS (D.N.J. 2020).
  - Referenced by the Court in *In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation*, 337 F.R.D. 610 (D.N.J. 2020).
- William Morris Endeavor Entertainment, LLC v. Writers Guild of America, West, Inc., Case No. 2:19-cv-05465-AB-AFM (C.D. Cal. 2020).
- In re: Ethiopian Airlines Flight ET 302 Crash, Lead Case No. 1:19-cv-02170 (Consolidated) (N.D. Ill. 2020).
- Kalra v. Mercedes Benz Canada Inc., File No. CV-16-550271-00CP (ON Sup. Ct. Justice 2019).
- Quinn Insurance Ltd. (Under Administration) v. Price Waterhouse Cooper (A Firm), Case No. 2012/1540 P (High Court (Commercial) of Ireland).
- In re Domestic Airline Travel Antitrust Litigation, MDL No. 2656, Misc. No. 15-1404 (CKK) (D.D.C. 2018).
  - Cited by the Court in *In re Domestic Airline Travel Antitrust Litigation*, 2018 WL 4441507 (D.D.C. Sept. 13, 2018).

- In re: Intel Corp. CPU Marketing, Sales Practices and Products Liability Litigation, Case No. 3:18-md-02828-SI (D. Or. 2018), In re: Intel Corp. Securities Litigation, Case No. 18-cv-00507-YGR (N.D. Cal. 2018), Lipovich v. Krzanich, Case No. 5:18-cv-01489 (N.D. Cal. 2018), and In re: Intel Corp. Shareholder Derivative Litigation, Case No. 5:17-md-02773-LHK-NMC (N.D. Cal. 2018).
- In re Qualcomm Litigation, Case No. 3:17-cv-00108-GPC-MDD (S.D. Cal. 2017); Federal Trade Commission v. Qualcomm Inc., Case No. 5:17-cv-00220-LHK-NMC (N.D. Cal. 2017); In re Qualcomm Antitrust Litigation, Case No. 5:17-md-02773-LHK-NMC (N.D. Cal. 2017).
- In re: Xarelto (Rivaroxaban) Products Liability Litigation, MDL No. 14-md-2592 (EEF) (E.D. La. 2017).
- Federal Trade Commission v. Church & Dwight Co., Inc., Case No. 1:10-00149-EGS-JMF D.D.C. 2010) (appointed by Hon. John M. Facciola as advisor to the Court).

#### SELECTED PROFESSIONAL RECOGNITION

Ranked in Chambers & Partners USA and Global Litigation: E-Discovery & Information Governance (2013–2023)

- Named to "Senior Statesperson" Category (2023); "There's no one more knowledgeable in the US and Canada, to be honest." (2023).
- "Maura Grossman is noted for her expertise in predictive coding and technology-assisted review, and her depth of knowledge sees her regularly appointed as a special master. 'She is one of the smartest people in the ESI area and she knows TAR better than anyone else. She is a force to be reckoned with, she is so smart, so insightful, she is constantly looking at how to move the bar forward, and as a result she is a go-to resource.' 'As one of the innovators of TAR, and a thought leader in the field, she provides unparalleled expertise, and not only is she a capable advocate, but her positions are reasoned and based on proven scientific principles.'" (2021/2022).
- "Maura Grossman is noted for her expertise in predictive coding and technology-assisted review, with peers reporting: 'She knows more about TAR than anybody in the world.' Her depth of knowledge sees her regularly appointed as a special master... 'Her legal and technical skills and services are superlative.'" (2020).
- "Maura Grossman is widely acknowledged to be one of the most distinguished specialists in predictive coding and is lauded as 'the queen of TAR.' She is routinely appointed as a special master. 'She changed the paradigm and has created tools and thinking. She is brilliant.'" (2019).
- "Maura Grossman is a recognized leader in TAR work... 'She's been a trailblazer and thought leader in the use of artificial intelligence in e-discovery.' She is also frequently called upon to act as a special master, mediator, and court-appointed expert, where she attracts praise for her 'encyclopedic knowledge of e-discovery law.'" (2018).

Named by Who's Who Legal: Global Elite Thought Leaders – Litigation – E-Discovery, as one of eight (2023), three (2022), six (2021), five (2020), or six (2019) top eDiscovery Lawyers worldwide ("Maura Grossman sits among Canada's finest e-discovery specialists, with contributors saying that 'there is nobody with more knowledge about e-discovery here or abroad'" (2022); "one of the leading figures in North America' for eDiscovery matters and 'well-known for her expertise on technology assisted review'" (2021); ("'probably the leading name in e-discovery' applaud sources, adding she is a 'future-thinker, bringing innovative thinking to the practice'" (2020); and "an elite eDiscovery specialist,' who is 'one of the leading experts, if not the leading expert in technology-assisted review'" (2019)).

Named by Who's Who Litigation: Thought Leaders – Commercial Litigation – E-Discovery (Canada) E-Discovery Practitioners – Canada as one of ten (2024) and seven (2023) Canadian thought leaders in eDiscovery, widely recognized as "'a trailblazer' in the field across Canada and the US," and as "a guru in the e-discovery space" (2022), "among the World's highest-ranking eDiscovery lawyers . . . '[a] well respected thought leader in the e-discovery space' who stands out as a 'perfect combination of lawyer and technologist" (2020), as "one of the leading experts, if not the leading expert, in technology-assisted review" (2019), and as a "Leading Individual" and "Most Highly Regarded" (2018) ("Commentators say 'she is 'a star' in the market and hold her in high esteem as 'a highly effective legal expert on technology and machine learning algorithms."").

**Selected by the CENTRE**@CLEF2019: Maura R. Grossman and Gordon V. Cormack,  $MRG_UMaterloo$  and Waterloo Cormack Participation in the TREC 2017 Common Core Track, published in the Proc. of the Text Retrieval Conference ("TREC") 2017, selected for "a joint CLEF/NCTIR/TREC Task challenging participants to reproduce the best results of the most interesting systems in previous additions of CLEF/NCTIR/TREC" (2019).

**Named by** *The Obelisk* as "One of the Top Six Women in Law Who are Changing the Legal Industry as We Know It" (2018).

Named by the ABA Legal Technology Resource Center to its list of Ten Top "Women in Legal Tech" (2017).

Named by Fastcase to the *Fastcase50 List* (2017), honoring the year's 50 "smartest, most courageous innovators, techies, visionaries, and leaders in the law."

Named by the Association of Certified E-Discovery Specialists ("ACEDS") and Women in eDiscovery ("WiE") as a "Pioneer and Innovator in eDiscovery and Legal Technology" (2017).

Named by the *American Bar Association ("ABA") Journal* as a "Legal Rebel" (Sept. 2016 issue), honoring "the 10 most notable innovators and mavericks in the legal profession."

**Profiled in a feature story in** *The American Lawyer* (Feb. 2016 issue), "The Lawyer Inventor: Maura Grossman of Wachtell Developed a Better Way to Do E-Discovery. Why are So Few Other Firms Taking a Lead with Tech?" by Susan Beck.

Ranked in Who's Who Legal: E-Discovery Analysis as "sensational' according to her peers and 'a go-to' in the area" of eDiscovery (2015 & 2016).

#### **BAR MEMBERSHIPS**

New York State	2000-Present
Southern District of New York	2002-Present
Eastern District of New York	2002–Present

#### OTHER LEGAL EXPERIENCE

 Wachtell, Lipton, Rosen & Katz
 New York, NY

 Of Counsel
 2013–2016

 Counsel
 2007–2013

 Litigation Associate
 1999–2003 & 2004–2006

Altria Corporate Services, Inc. Assistant General Counsel		New York, NY 2003
Kirkland & Ellis Summer Associate		New York, NY 1998
Powell, Goldstein, Frazer & Murphy, LLP Summer Associate		Washington, DC 1997
PSYCHOLOGY EXPERIENCE		
Fordham-Tremont Community Mental Health Center / St. B. Deputy Director for Clinical & Preventive Services	arnabus Hospital	Bronx, NY 1991–1996
<ul> <li>Honors and Awards         Certificate of Recognition for Inn in New York State, Mental He Creative Connections Award for State Department of Mental He Alcoholism Services         Certificate of Recognition for Excognition for Excognition for Out Illness Awareness Week, Brond     </li> </ul>	alth Planning Advisory Cou Systems Initiatives, New You ealth, Mental Retardation and cellence in Bringing Mental rican Psychiatric Association testanding Contribution to Me	ncil ork d Illness n ental
Private Practice Psychologist & Consultant		Forest Hills, NY 1988–1996
Woodhull Medical & Mental Health Center / NYC Health & Director of Psychological Services	: Hospitals Corporation	Brooklyn, NY 1988-1996
Pride of Judea Mental Health Center Psychologist & Director of Training Fordham University Counseling and Psychological Services Psychologist & Assistant Director		Queens, NY 1986–1988
ADJUNCT FACULTY POSITIONS		Bronx, NY 1985–1986
Vector Institute of Artificial Intelligence Georgetown University Law Center Columbia Law School Pace University Law School Rutgers Law School–Newark New York College of Osteopathic Medicine Columbia University School of Social Work New York University Queens College of the City University of New York Gordon F. Derner Institute / Adelphi University	2018-Present 2014-2018 2012-2016 2011-2013 2010-2012 1992-1996 1992-1996 1989-1991 1988-1989 1981-1988	Toronto, ON Washington, DC New York, NY White Plains, NY Newark, NJ Valhalla, NY New York, NY New York, NY Flushing, NY Garden City, NY

#### **COURSES TAUGHT**

Legal Values: Artificial Intelligence (Discrimination and Surveillance)	2024-Present
The Social Implications of Computing: Discrimination, Privacy, and Surveillance	2023-Present
in Computing	
Multidisciplinary Studies in Computer Science: Computing and Discrimination	2022-Present
The Social Implications of Computing	2021-Present
Ethics Workshop for Data Scientists	2020-Present
Artificial Intelligence: Law, Ethics, and Policy	2017 -2020
Electronic Discovery	2010-2018
High-Stakes Information Retrieval	2016
Psychological Assessment	1981-1989

#### **PATENTS**

- 1. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Classifying Electronic Information Using Advanced Active Learning Techniques*, US11080340 (Granted/Issued 2021).
- 2. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for a Scalable Continuous Active Learning Approach to Information Classification*, US10671675 (Granted/Issued 2020).
- 3. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Conducting and Terminating Technology Assisted Review*, US10445374 (Granted/Issued 2019).
- 4. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Conducting and Terminating Technology Assisted Review*, US10353961 (Granted/Issued 2019).
- 5. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Conducting and Terminating Technology Assisted Review*, US10242001 (Granted/Issued 2019).
- 6. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Conducting a Highly Autonomous Technology Assisted Review Classification*, US10229117 (Granted/Issued 2019).
- 7. Maura R. Grossman and G.V. Cormack, *Systems and Methods for Classifying Electronic Information Using Advanced Active Learning Techniques*, US9122681 (Granted/Issued 2014).
- 8. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Classifying Electronic Information Using Advanced Active Learning Techniques*, US8838606 (Granted/Issued 2014).
- 9. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Classifying Electronic Information Using Advanced Active Learning Techniques*, US8713023 (Granted/Issued 2014).
- 10. Maura R. Grossman and Gordon V. Cormack, *Systems and Methods for Classifying Electronic Information Using Advanced Active Learning Techniques*, US9678957 (Granted/Issued 2014).

#### SOFTWARE DISTRIBUTION

- 1. Gordon V. Cormack and Maura R. Grossman, *DynEval Information Retrieval Tool*, available at <a href="https://cormack.uwaterloo.ca/sample/">https://cormack.uwaterloo.ca/sample/</a> (2018).
- 2. Mustafa Abualsaud, Nimesh Ghelani, Haotian Zhang, Mark D. Smucker, Gordon V. Cormack, and Maura R. Grossman, *HiCAL: A System for Efficient High-Recall Retrieval, available at* <a href="https://github.com/hical/HiCAL">https://github.com/hical/HiCAL</a> (2018).
- 3. Gordon V. Cormack and Maura R. Grossman, *TREC Legal Track Baseline Model Implementation ("BMI")*, available at https://cormack.uwaterloo.ca/trecvm/ (2015).
- 4. Gordon V. Cormack and Maura R. Grossman, *TAR Evaluation Toolkit, available at* https://cormack.uwaterloo.ca/tar-toolkit/ (2013).

#### **TRADEMARKS**

- 1. Continuous Active Learning (Registered Oct. 2019)
- 2. CAL (Registered Oct. 2019)

#### SELECTED PROFESSIONAL AFFILIATIONS AND SERVICE 2007 – PRESENT

Member, Ontario Civil Rules Committee AI Standing Subcommittee	2023-Present
Member, Board of Directors, CanLII	2023-Present
Member and Co-Chair, American Bar Association ("ABA") Task Force on Law and Artificial Intelligence and Subcommittee on Artificial Intelligence and the Courts	2023-Present
Member, Advisory Board, Osgoode Certificate Program in E-Discovery Information Governance, and Privacy	2022–Present
Faculty Representative, University of Waterloo Faculty of Mathematics Employee Health and Well-Being Committee / Advisory Committee on Community and Well-Being	2021-Present
Member and Chair, David R. Cheriton School of Computer Science Equity, Diversity, Inclusion ("EDI") Committee	2020-Present
<i>Member</i> , Institute of Electrical and Electronics Engineers ("IEEE") Standards Association Working Group on IEEE P2863 <sup>TM</sup> – Recommended Practice for Organizational Governance of Artificial Intelligence	2020-Present
Planning Committee Member and Co-Chair, Ontario Bar Association ("OBA"), the Law Society of Ontario, and the Advocates' Society 2020–2024 Digital Evidence and eDiscovery Institutes	2020-Present

Member, Digital Evidence and eDiscovery Working Group ("DDEE") of the Ontario Bar Association ("OBA")	2020-Present
Member, Electronic Discovery Reference Model ("EDRM") Global Advisory Council	2020- Present
Program Committee Member, International Conference on Artificial Intelligence and Law ("ICAIL")	2019–Present
Member, Global Advisory Board, Association of Certified eDiscovery Specialists ("ACEDS")	2019-Present
Steering Committee Chair, Member, Drafting Team Member and Lead, The Sedona Conference Working Group 7 – Sedona Canada and The Sedona Canada Principles Addressing Electronic Discovery: Third Edition; The Sedona Canada Primer on Artificial Intelligence and the Practice of Law	2019–Present
Member, The Sedona Conference Working Group Series Leadership Council	2019-Present
Member, University of Waterloo Artificial Intelligence ("AI") Institute	2017-Present
Member, University of Waterloo Cybersecurity and Privacy Institute("CPI")	2017-Present
Approved E-Discovery Mediator and E-Discovery Special Master, United States District Court for the Western District of Pennsylvania	2016-Present
Chair Emeritus, Co-Chair, and Member, Electronic Discovery Committee, New York State Bar Association ("NYSBA") Commercial and Federal Litigation Section	2015-Present
Member, Advisory Board and Planning Committee, Arizona State University ("ASU") – Arkfeld Annual eDiscovery and Digital Evidence Conference	2015-Present
Research Collaborator, Volunteer, and Contractor, The Library of Virginia .	2015-Present

- Reported in Susan Beck, Wachtell E-Discovery Guru Sets Sights on Presidential Race, The American Lawyer (July 27, 2016), available at https://www.law.com/sites/almstaff/2016/07/27/wachtell-e-discovery -guru-sets-sights-on-presidential-race/
- Reported in Gabe Friedman, See and Search Tim Kaine's Email on This Website, Bloomberg Law: Business & Practice (July 27, 2016), available at https://news.bloomberglaw.com/business-and-practice/seeand-search-tim-kaines-emails-on-this-website.
- Reported in Victor Li, E-Discovery Pioneer Creates Smart Search for Archive of VP Candidate's Emails, American Bar Association ("ABA") Journal (July 28, 2016), available at https://www.abajournal.com/news/ article/e discovery pioneer launches second act.
- Reported in Roger Christman, Library Makes New Batch of Emails From Governor Timothy M. Kaine Administration Available Online, The Uncommon Wealth: Voices From the Library of Virginia (Oct. 18, 2018), available at https://uncommonwealth.virginiamemory. com/blog/2018/10/18/library-makes-new-batch-of-emails-fromgovernor-timothy-m-kaine-administration-available-online-3/.

Reported in Susangray Eaken Page, *The Elephant in the Room:*Artificial Intelligence Tapped to Help Process a Mountain of
Governor Tim Kaine's Emails, 4 BroadSIDE: The Magazine of the Library of Virginia 10-11 (Dec. 2018).

Planning Committee Co-Chair and Member, and Advisory Board Member, The Georgetown Advanced eDiscovery Institute	2010-Present
University of Waterloo David R. Cheriton School of Computer Science EDI Committee Representative, University of Waterloo Faculty of Mathematics Equity, Diversity, Inclusion, Anti-Racism + Indigenization ("EDI-R+I") Strategic/Lens Committee	2021–2023
Workshops Co-Chair, 46th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval ("SIGIR 2023")	2021–2023
Member, University of Waterloo Faculty of Mathematics Student Course Perceptions Working Group	2022–2023
University of Waterloo David R. Cheriton School of Computer Science EDI Committee Representative, University of Waterloo Faculty of Mathematics Equity, Diversity, Inclusion, Anti-Racism + Indigenization ("EDI-R+I") Strategic/Lens Committee	2022–2023
Program Area Lead ("PAL"), University of Waterloo Equity, Diversity, Inclusion and Anti-Racism Office ("EDI-RO") Initiative	2021–2023
Co-Chair and Member, David R. Cheriton School of Computer Science Women in Computer Science ("WiCS") Committee	2019–2022
Member, Technology Working Group of Chief Judge Janet DiFiore's Committee to Reimagine the Future of New York's Courts	2018–2021
Member, University of Waterloo Council on Responsible Innovation and Technology ("CRIT")	2018–2021
Member, University of Waterloo School of Computer Science Executive Committee	2019-2020
Member, University of Waterloo Committee on Women in Mathematics ("WiM")	2019-2020
Technical Program Committee Member, 2018 International Workshop on Legal Data Analytics and Mining ("LegDAM 2018") at the 27th ACM International Conference on Information and Knowledge Management ("CIKM 2018")	2018
Organizer and Program Co-Chair, 12th Annual Sedona Conference Institute ("TSCI") Program on Applying eDiscovery Skills and Technology to All Areas of the Law	2018
External Reviewer, Canadian Institute for Advanced Research ("CIFAR") UK Research and Innovation ("UKRI") and Centre National de la Researche Scientifique ("CRNS") Global Competition for AI & Society Research Workshops on Trust in AI Systems	2018

Member of Judging Panel, Hausfeld LLP / Sedona Conference 2018 William P. Butterfield Award for Excellence in eDiscovery Writing	2018
Member, Law Committee, The Institute of Electrical and Electronics Engineers ("IEEE") Global Initiative on Ethics of Autonomous and Intelligent Systems	2018
Chair, AI Subcommittee and Member, New York State Bar Association ("NYSBA")  Committee on Technology and the Legal Profession	2017-2021
Member, Balsillie School of International Affairs AI and Human Rights Advisory Board	2017–2018
Participating Team, National Institute of Standards and Technology's ("NIST's") Text REtrieval Conference ("TREC") 2017 and 2018 Common Core Tracks	2017–2018
Participating Team, 2017 and 2018 CLEF eHealth Labs: Technology Assisted Reviews in Empirical Medicine	2017-2018
Member, The Benjamin N. Cardozo School of Law Data Law Initiative Advisory Board	2014–2018
Co-Coordinator and Participating Team, National Institute of Standards and Technology's ("NIST's") Text Retrieval Conference ("TREC") Total Recall Tracks	2015–2016
Organizer and Program Chair, The Sedona Conference Institute ("TSCI") New York	2013
Steering Committee Member and Member, Seventh Circuit Council on eDiscovery and Digital Information	2012-2020
Member, Attorney Advisory Group to the Judicial Improvements Committee of the U.S. District Court for the Southern District of New York	2011
Member, Bloomberg Bureau of National Affairs ("BNA") Digital Discovery & eEvidence Report Advisory Board	2010-2018
Co-Coordinator, Topic Authority, and Participating Team, National Institute of Standards and Technology's ("NIST's") Text Retrieval Conference ("TREC") Legal Tracks	2008–2011
Member, The Association of the Bar of the City of New York Committee on Professional and Judicial Ethics	2007-2008

#### **RESEARCH INTERESTS**

My principal research focus is on high-recall information retrieval ("HRIR"), which falls at the intersection of technology and other disciplines including the law, government archives, and healthcare. In particular, I study the application and evaluation of supervised machine-learning technologies for use in electronic discovery in litigation, in the curation of government records, and for systematic reviews in evidence-based medicine. I also conduct research in the area of the legal, ethical, and policy implications of artificial intelligence.

#### REFEREED JOURNAL ARTICLES, LAW REVIEWS & PEER-REVIEWED CONFERENCE PAPERS

- 1. Nicole Shaver, Ba' Pham, Niyati Vyas, Alexandria Bennett, Andrew Beck, Becky Skidmore, Maura R. Grossman, Gordon V. Cormack, Sharmistha Mishra, Adrienne Chan, David Moher, Melissa Browers, Andrea C. Tricco, and Julian Little, *Infection Prevention and Control Measures for Ebola and Marburg Disease: An Evidence Synthesis*, Int'l J. Public Health ("IJPH") 1-54 (2024). [Under Review]
- 2. Kaylen J. Pfisterer, Shumit Saha, Yan Fossat, Maura R. Grossman, Alex Wong, Azadeh Yadollahi, Bo Wang, Larisa Dinu, Dimitra Kale, Corinna Leppin, Melissa Oldham, Madison Taylor, Ian Connell, Claire Garnett, Animesh Garg, and Quynh Pham, Responsible Artificial Intelligence in Clinical Decision Support Systems Requires Good Science: Lessons Learned From an International Roundtable Discussion, npj Digital Medicine 1-20 (2024). [Under Review]
- 3. Anindya Sen, Helen Chen, Maura R. Grossman, and Shu-Feng Tsao, *A Welfare Test for Patient Data Sharing*, The Review of Income and Wealth 1-35 (2024). [Under Review]
- 4. Calvin Hills, Maushumi Bhattacharjee, Tarik Eltanahy, Batool AlMousawi, Sara Ono, Marcus Hui, Ba' Pham, Michelle Swab, Gordon V. Cormack, Maura R. Grossman, Ebrahim Bagheri, and Zack Marshall, *Training Post-Secondary Students on the Ethics of AI: A Scoping Review*, Systematic Reviews 1-\_\_ (2024). [Under Review]
- Maura R. Grossman, Gordon V. Cormack, Andrew Harbison, Tom O'Halloran, and Bronaugh McManus, *In-Situ Validation of Technology-Assisted Review for eDiscovery*, 47th International ACM SIGIR Conference on Research and Development in Information Retrieval ("SIGIR '24") 1-6 (2024). [Under Review]
- 6. Abhishek Dalal, Chongyang Gao, Paul W. Grimm, Maura R. Grossman, Daniel W. Linna, Jr., Chiara Pulice, V.S. Subrahmanian, and John Turnheim, *Deepfakes in Court: How Judges Can Proactively Manage Alleged AI-Generated Material in National Security Cases*, 2023 The U. Chicago Legal Forum 1-26 (2024). [Accepted; In Progress]
- 7. Tom O'Halloran, Bronaugh McManus, Andrew Harbison, Maura R. Grossman, and Gordon V. Cormack, Comparison of Tools and Methods for Technology-Assisted Review, 10th International Conference on Information Management ("ICIM 2024") 1-10 (Mar. 2024).
- 8. Bronaugh McManus, Tom O'Halloran, Andrew Harbison, Maura R. Grossman, and Gordon V. Cormack, *Limitations of the Utility of Categorization in eDiscovery Review Effort*, 10th International Conference on Information Management ("ICIM 2024") 1-4 (Mar. 2024).
- 9. Marilyn Macdonald, Lori E. Weeks, Erin Langman, S. Roach, Morgan X. MacNeil, Julie Caruso, Andrea C. Tricco, Ba' Pham, Sharon Straus, Sujata Mishra, Wanrudee Isaranuwatchi, Gordon V. Cormack, Maura R. Grossman, Alexa Yakubovich, Arezoo Mojbafan, Melissa Ignaczak, Caron Leid, Jennifer Watt, Susan Stevens, Tayaba Khan, Desmond Loong, Janet Curran, Elaine Moody, and Ricardo Rodrigues, Recent Initiatives to Improve Long-Term Care Coverage, Financial Protection and Financial Stability: A Rapid Scoping Review, \_\_ BMJ Open \_\_ (2024). [Accepted; In Progress]
- 10. Maura R. Grossman, Paul W. Grimm, Daniel G. Brown, and Molly (Yiming) Xu, *The GPTJudge: Justice in a Generative AI World*, 23:1 Duke L. & Tech. Rev. 1-34 (Dec. 2023).
  - Paper featured in Library & Research Services for the Courts of the Ninth Circuit's Read the Reviews List (Dec. 19, 2023).

- Paper featured in Montreal AI Ethics Institute AI Ethics Brief #135, In Case You Missed It (Dec. 6, 2023).
- Paper recommended and reprinted in Advisory Committee on Evidence Rules October 27, 2023 Agenda Book, Tab 2D, 201-227, U.S. Courts (Oct. 5, 2023).
- Paper ranked by SSRN on *Top-Ten List of Most Downloaded Papers* (June 21 Aug. 15, 2023 and again Jan. 13 14, 2024).
- Paper featured in 20:6 SSRN Legal Scholarship Network: Public Law & Legal Theory Paper Series, Duke Law School (June 29, 2023).
- Paper featured in Raffaella Aghemo, *How much longer will we be able to see the truth?*, DataDrivenInvestor (June 18, 2023).
- Paper recommended in Angela Delvecchio, ChatGPT goes to court, Project Counsel Media (June 16, 2023).
- Paper featured in Ralph Losey, *REAL OR FAKE? New Law Review Article Provides a Good Framework for Judges to Make the Call*, eDiscovery Team Blog (June 15, 2023).
- Paper reprinted in JDSupra (June 13, 2023).
- Paper reprinted in Electronic Discovery Reference Model ("EDRM") Blog (June 13, 2023).
- Paper referenced in Jack Karp, Texas Judge's AI Order Not Unreasonable, And Not The Last, Law360 Pulse (May 31, 2023).
- Paper featured in Doug Austin, *Justice in a Generative AI World: Artificial Intelligence Trends*, eDiscovery Today (May 31, 2023).
- Paper featured in Emily Sawicki, AI Will Challenge Courts But Existing Rules Offer Road Map, Law360 Pulse (May 30, 2023).
- Paper featured in Rob Robinson, A Deep Dive into Unchartered Waters: An Exploratory Analysis of Justice in a Generative AI World, Complex Discovery (May 25, 2023).
- 11. Helen Chen, Maura R. Grossman, Anindya Sen, and Shu-Feng Tsao, *Establishing a FAIR, CARE, and Efficient Synthetic Health Data-Sharing Ecosystem in Canada*, Paper presented at the International Association for Research in Income and Wealth ("IARIW") and Centre for Governance and Innovation ("CIGI") Conference on The Valuation of Data and for publication in Special Issue of Income and Wealth, 1-29 (Nov. 3, 2023).
- 12. Marilyn Macdonald, Lori E. Weeks, Erin Langman, , Julie Caruso, Andrea C. Tricco, Ba' Pham, Sharon Straus, Sujata Mishra, Wanrudee Isaranuwatchi, Gordon V. Cormack, Maura R. Grossman, Alexa Yakubovich, Arezoo Mojbafan, Melissa Ignaczak, Caron Leid, Jennifer Watt, Susan Stevens, Tayaba Khan, Janet Curran, and Elaine Moody, *Patient partners in a rapid scoping review of long-term care initiatives: An evaluation of partner engagement*, Poster Presentation, Canadian Ass'n on Gerontology 52nd Ann. Scientific and Educational Conference 2023 ("CAG2023") (Oct. 28, 2023).
- 13. Maushumi Bhattachargee, Christopher Kaposy, Maura R. Grossman, and Zach Marshall, *Patient Photographs on Google Images: A Commentary on Informed Consent, Copyrights, and Privacy Laws*, 15:2 Law, Innovation and Tech. 1-23 (Fall 2023).
- 14. Tom O'Halloran, Bronagh McManus, Andrew Harbison, Maura R. Grossman, and Gordon V. Cormack, *Technology-Assisted Review for Spreadsheets and Noisy Text*, in Proc. of 23rd Ass'n for Computing Machinery ("ACM") Symposium on Document Engineering ("DocEng '23") No. 32, 1-4 (Aug. 2023).
- 15. Mona Ghannad, Anna Catharina V. Armond, Jeremy Y. Ng, Ana Patricia Ayala, Hassan Khan, Maura R. Grossman, Gordon V. Cormack, Ba' Pham, Mariska M. Leeflang, Patricia M. Bossuyt, Karim Khan, Clare Ardern, and David Moher, *Open science interventions proposed or implemented to assess researcher impact: a scoping review*, Innovations on Research Assessment F1000 Series 1-55 (July 30,

2023).

- 16. Maura R. Grossman et al. (eds.), *Using Special Masters and Discovery Mediators to Avoid and Resolve Discovery Disputes: A Bench Book for Judges and Attorneys, 2022 Ed.*, Electronic Discovery Reference Model ("EDRM") 1-40 (2022).
- 17. Cynthia Cwik, Paul W. Grimm, Maura R. Grossman, and Toby Walsh, *Artificial Intelligence*, *Trustworthiness*, *and Litigation*, Artificial Intelligence and the Courts: Materials for Judges 1-35 (American Association for the Advancement of Science (2022).
- 18. Owen Chambers, Robin Cohen, Maura R. Grossman, and Queenie Chen, *Creating a User Model to Support User-specific Explanations of AI Systems*, Adjunct Proc. of the 30th ACM Conference on User Modeling, Adaptation and Personalization ("UMAP '22 Adjunct") 163-166 (2022).
- 19. Ba' Pham, Patricia Rios, Amruta Radhakrishnan, Nazia Darvesh, Jesmin Antony, Chantal Williams, Naveeta Ramkisson, Gordon V. Cormack, Maura R. Grossman, Melissa Kampman Milan Patel, Fatemeh Yazdi, Reid Robson, Marco Ghasemi, Erin Macdonald, Rachel Warren, Matthew P. Muller, Sharon E. Straus, and Andrea C. Tricco, *Comparative-Effectiveness Research of COVID-19 Treatment: A Rapid Scoping Review*, BMJ Open 12:e045115 1-103 (2022).
  - Research Featured in Jason R. Baron, Ricardo Baeza-Yates, and Robert Gabeloff, *Off the Beaten Path: Data Analytics for Covid-19 and Beyond*, Georgetown Law 2020 Global Advanced eDiscovery Institute (Nov. 12, 2020).
  - Research Featured in Gordon V. Cormack, Mary Mack, and Katlee Frangos Walstad, *Illumination Zone* Podcast on Electronic Discovery Reference Model ("EDRM") Global Podcast Network (Sept. 25, 2020).
  - Research Featured in Jeremy Pickens and John Tredennick, Legal TAR Algorithm Helps
     Canadian Health Authorities Track Coronavirus Research, TAR Talk Podcast on Electronic
     Discovery Reference Model ("EDRM") Global Podcast Network (Episode 15, Sept. 18, 2020).
  - Research featured in Sharon D. Nelson, *The Battle Against COVID-19: How E-Discovery Software is Playing a Role*, Ride the Lightening (July 24, 2020).
  - Research featured in Sharon D. Nelson and John W. Simek, *The Battle Against COVID-19: How E-Discovery Software is Playing a Role*, Digital Detectives Podcast on Legal Talk Network (117th ed. July 15, 2020).
  - Research featured in Robert Ambrogi, *How E-Discovery Software Is Helping Battle COVID-19*, Above the Law (June 29, 2020).
  - Research featured in Robert Williams, Staying on Top of COVID-19 Discoveries, The Waterloo Region Record (May 24, 2020).
  - Research featured in Samantha Green, *Can Technology-Assisted Review Expedite Finding the Cure for COVID-19?*, JD Supra (May 21, 2020) and Epiq Angle (May 20, 2020).
  - Research featured in *Using Technology-Assisted Review to Find Effective Treatment, Procedures to Mitigate COVID-19*, Association for Computing Machinery ("ACM") TechNews (May 11, 2020).
  - Research featured in Doug Austin, *Maura Grossman and Gordon Cormack Put TAR to Work to Help with the COVID-19 Fight: eDiscovery Trends*, eDiscovery Today (May 7, 2020).
  - Research featured in Rob Robinson, A World of Difference: Technology-Assisted Review in the Fight Against COVID-19, Complex Discovery (May 7, 2020).
- 20. Maura R. Grossman et al. (eds. and contributor), *The Sedona Canada Principles Addressing Electronic Discovery, Third Ed.*, 23 Sedona Conf. J. 167-335 (2022).

- 21. Maura R. Grossman and Gordon V. Cormack, *The eDiscovery Medicine Show*, 18:1 Ohio State Tech. L.J. 1-17 (2021).
- 22. Paul W. Grimm, Maura R. Grossman, and Gordon V. Cormack, *Artificial Intelligence as Evidence*, 19 Nw. J. Tech. & Intell. Prop. 9-106 (2021).
  - Paper recommended and reprinted in Advisory Committee on Evidence Rules October 27, 2023
     Agenda Book, Tab 2C, 101-200f, U.S. Courts (Oct. 5, 2023).
  - Cited by the Court in *In re: Marriott Int'l, Inc. Customer Data Sec. Breach Litigation (Consumer Actions)*, MDL 19-md-2897 (D. Md. May 3, 2022).
- 23. Dan G. Brown, Lauren R. Byl, and Maura R. Grossman, *Are Machine Learning Corpora "Fair Dealing" Under Canadian Law*, Proc. of Twelfth Int'l Confr. on Creative Computation ("ICCC 2021") 158-62 (2021).
- 24. Maura R. Grossman and Gordon V. Cormack, 'Reaffirming the Superiority of Human Attorneys in Legal Document Review and Examining the Limitation of Algorithmic Approaches to Discovery': Not So Fast, 27 Richmond J. L. & Tech., no. 4 1-4 (2021).
- 25. Patricia Rios, Amruta Radhakrishnan, Chantal Williams, Naveeta Ramkisson, Ba' Pham, Gordon V. Cormack, Maura R. Grossman, Matthew P. Muller, Sharon E. Straus, and Andrea C. Tricco, *Preventing the Transmission of Coronavirus (COVID-19) in Older Adults Aged 60 Years and Above Living in Long-Term Care*, 9:218 Sys. Rev. 1-8 (2020).
  - Research Featured in Jason R. Baron, Ricardo Baeza-Yates, and Robert Gabeloff, Off the Beaten Path: Data Analytics for Covid-19 and Beyond, Georgetown Law 2020 Global Advanced eDiscovery Institute (Nov. 12, 2020).
  - Research Featured in Gordon V. Cormack, Mary Mack, and Katlee Frangos Walstad, *Illumination Zone* Podcast on Electronic Discovery Reference Model ("EDRM") Global Podcast Network (Sept. 25, 2020).
  - Research Featured in Jeremy Pickens and John Tredennick, Legal TAR Algorithm Helps
     Canadian Health Authorities Track Coronavirus Research, TAR Talk Podcast on Electronic
     Discovery Reference Model ("EDRM") Global Podcast Network (Episode 15, Sept. 18, 2020).
  - Research featured in Sharon D. Nelson, *The Battle Against COVID-19: How E-Discovery Software is Playing a Role*, Ride the Lightening (July 24, 2020).
  - Research featured in Sharon D. Nelson and John W. Simek, *The Battle Against COVID-19: How E-Discovery Software is Playing a Role*, Digital Detectives Podcast on Legal Talk Network (Episode 117, July 15, 2020).
  - Research featured in Robert Ambrogi, *How E-Discovery Software Is Helping Battle COVID-19*, Above the Law (June 29, 2020).
  - Research featured in Robert Williams, Staying on Top of COVID-19 Discoveries, The Waterloo Region Record (May 24, 2020).
  - Research featured in Samantha Green, *Can Technology-Assisted Review Expedite Finding the Cure for COVID-19?*, JD Supra (May 21, 2020) and Epiq Angle (May 20, 2020).
  - Research featured in *Using Technology-Assisted Review to Find Effective Treatment, Procedures to Mitigate COVID-19*, Association for Computing Machinery ("ACM") TechNews (May 11, 2020).
  - Research featured in Doug Austin, *Maura Grossman and Gordon Cormack Put TAR to Work to Help with the COVID-19 Fight: eDiscovery Trends*, eDiscovery Today (May 7, 2020).
  - Research featured in Rob Robinson, A World of Difference: Technology-Assisted Review in the Fight Against COVID-19, Complex Discovery (May 7, 2020).

- 26. Haotian Zhang, Gordon V. Cormack, Maura R. Grossman, and Mark D. Smucker, *Evaluating Sentence-Level Relevance Feedback for High-Recall Retrieval*, 22 Info. Retrieval J. ("IRJ") 1-26 (2020).
- 27. Maura R. Grossman et al. (eds.), *The Use of Artificial Intelligence in eDiscovery*, Electronic Discovery Reference Model ("EDRM") 1-12 (2020).
- 28. Gordon V. Cormack and Maura R. Grossman, *Unbiased Low-Variance Measures for Precision and Related Information Retrieval Effectiveness Measures*, Proc. of the 42nd Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2019") 945-48 (2019).
- 29. Gordon V. Cormack and Maura R. Grossman, *Quantifying Bias and Variance Measures of System Rankings*, Proc. of the 42nd Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2019") 1089-92 (2019).
- 30. Gordon V. Cormack, Haotian Zhang, Nimesh Ghelani, Mustafa Abualsaud, Mark D. Smucker, Maura R. Grossman, Shahin Rahbariasl, and Amira Ghenai, *Dynamic Sampling Meets Pooling*, Proc. of the 42nd Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2019") 1217-20 (2019).
- 31. Mustafa Abualsaud, Nimesh Ghelani, Haotian Zhang, Mark D. Smucker, and Maura R. Grossman, *A System for Efficient High-Recall Retrieval*, Proc. of the 41st Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2018") 1317-20 (2018).
- 32. Gordon V. Cormack and Maura R. Grossman, *Beyond Pooling*, Proc. of the 41st Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2018") 1169-72 (2018).
- 33. Gordon V. Cormack and Maura R. Grossman, *Technology-Assisted Review in Empirical Medicine:*Waterloo Participation in CLEF eHealth 2018, in L. Cappellato, N. Ferro, J.Y. Nie, and L. Soulier (eds.),
  Working Notes of CLEF 2018 Conference and Labs in the Eval. Forum, Vol. 2125 Paper 89 (2018),
  CEUR Workshop Proc., CEUR-WS-org/Vol-2125 (2018).
- 34. Haotian Zhang, Mustafa Abualsaud, Nimesh Ghelani, Mark D. Smucker, Gordon V. Cormack, and Maura R. Grossman, *Effective User Interaction for High-Recall Retrieval: Less is More*, 27th Int'l Conference on Info. & Knowledge Mgmt. ("CIKM 2018") 187-96 (2018).
- 35. Gordon V. Cormack and Maura R. Grossman, *Technology-Assisted Review in Empirical Medicine: Waterloo Participation in CLEF eHealth 2017*, in L. Cappellato, N. Ferro, L. Goeuriot, and T. Mandl (eds.), Working Notes of CLEF 2017 Conference and Labs in the Eval. Forum, Vol. 1866 Paper 52 (2017), CEUR Workshop Proc., CEUR-WS.org/Vol-1866 (2017).
- 36. Gordon V. Cormack and Maura R. Grossman, *Navigating Imprecision in Relevance Assessments on the Road to Total Recall: Roger and Me*, in Proc. of the 40th Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2017") 5-14 (2017).
- 37. Maura R. Grossman and Gordon V. Cormack, *Automatic and Semi-Automatic Selection for Technology-Assisted Review*, in Proc. of the 40th Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2017") 905-08 (2017).
- 38. Gordon V. Cormack and Maura R. Grossman, *Scalability of Continuous Active Learning for Reliable High-Recall Text Classification*, in Proc. of the 25th ACM Int'l Conference on Info. & Knowledge Mgmt. ("CIKM 2016") 1039-48 (2016).

- 39. Maura R. Grossman (ed.-in-chief), *The Sedona Conference Commentary on Defense of Process:*Principles and Guidelines for Developing and Implementing a Sound E-Discovery Process, 1-47 (The Sedona Conference 2016).
  - Cited by the Court in *Terpin* v. *AT&T Inc.*, 2022 WL 3013153 (C.D. Cal. June 13, 2022).
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  - Cited by the Court in Uschold v. Carriage Svc., Inc., 2019 WL 8298261 (N.D. Cal. Jan. 22, 2019).
  - Cited by the Court in City of Rockford v. Mallinckrodt ARD Inc., 2018 WL 3766673 (N.D. Ill. Aug. 7, 2018).
  - Cited by the Court in *Brewer* v. *BNSF Railway Co.*, 2018 WL 882812 (D. Mont. Feb. 14, 2018).
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- 40. Maura R. Grossman (ed.-in-chief), *The Sedona Conference TAR Case Law Primer*, 18 Sedona Conference J. 1-53 (2016).
  - Cited by the Court in Lawson v. Spirit AeroSystems, Inc., 2020 WL 1813395 (D. Kansas Apr. 20, 2020).
  - Cited by the Court in FCA v. Cummins, Inc., 2017 WL 2806896 (E.D. Mich. Mar. 28, 2017).
- 41. Gordon V. Cormack and Maura R. Grossman, *Engineering Quality and Reliability in Technology- Assisted Review*, in Proc. of the 39th Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2016") 75-84 (2016).
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- 43. Adam Roegiest, Gordon V. Cormack, and Maura R. Grossman, *Impact of Surrogate Assessments on High-Recall Retrieval*, in Proc. of the 38th Int'l ACM SIGIR Conference on Rsch. & Dev. in Info. Retrieval ("SIGIR 2015") 555-64 (2015).
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- 45. Maura R. Grossman and Gordon V. Cormack, *Comments on "The Implications of Rule 26(g) on the Use of Technology-Assisted Review,"* 7 Fed. Cts. L. Rev. 285-313 (2014).
  - Cited by the Court in *DR Distributers, LLC.* v. 21 Century Smoking Inc., v. CB Distributors, Inc., 2021 WL 168964 (N.D. Ill. Jan. 19, 2021).
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- Cited by the Court in *Johnson* v. *Ford Motor Co.*, 2015 WL 4137707 (S.D. W. Va. July 8, 2015).
- Cited by the Court in *Burnett* v. *Ford Motor Co.*, 2015 WL 4137847 (S.D. W. Va. July 8, 2015).
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- 105. Ankit Vadehra, Maura R. Grossman, and Gordon V. Cormack, *Impact of Feature Selection in Micro-Text Classification*, <a href="https://arxiv.org/abs/1708.08123">https://arxiv.org/abs/1708.08123</a> (cs.IR) 1-4 (Cornell Univ. Library Aug. 27, 2017).
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- 108. Gordon V. Cormack and Maura R. Grossman, *Autonomy and Reliability of Continuous Active Learning for Technology-Assisted Review*, <a href="https://arxiv.org/abs/1504.06868">https://arxiv.org/abs/1504.06868</a> (cs.IR) 1-19 (Cornell Univ. Library Apr. 26, 2015).
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- 111. Maura R. Grossman (ed.-in-chief), *Bench Book for New York State Judges Pertaining to the Discovery of Electronically Stored Information ("ESI")*, 1-24 (N.Y.S. Unified Court System Aug. 2015).
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- 114. Maura R. Grossman (primary drafter), 2013 revisions to Sections 202.12(b) and 202.12(c) of the Uniform Rules for the New York Supreme and County Courts and 2013 revisions to Rule 8 of Section 202.70(g) of the Rules of Practice for the New York Commercial Division of the New York Supreme and County Courts (2013).
- Daniel J. Capra, Hon. Sidney A. Fitzwater, Hon. Lee Rosenthal, Hon. Paul Grimm, Hon. Paul S. Diamond, Hon. John Facciola, Hon. Geraldine Soat Brown, John Barkett, Chilton Varner, Ariana Tadler, Maura R. Grossman, Steven Morrison, Daniel Smith, Edwin Buffmire, Ken Brown, Allyson Haynes Stuart, Rick Marcus, Ann Murphy, and Liesa Richter, *Reinvigorating Rule 502*, Evidence Committee Symposium on Rule 502: Panel Discussion, 81 Fordham L. Rev. 1533-86 (2013).
- 116. Lawrence B. Pedowitz, John F. Savarese, David Gruenstein, Ralph M. Levene, Wayne M. Carlin, Jonathan M. Moses, David B. Anders, and Maura R. Grossman, White Collar and Regulatory Enforcement: What to Expect in 2013, 50 Bank and Corp. L. Reporter 12-19 (2013) and The Harvard L. School Forum on Corp. Gov. and Fin. Reg. (Jan. 30, 2013).
- 117. Maura R. Grossman, S.D.N.Y. Opinion Paves Way for Use of Technology-Assisted Review in E-Discovery, Wachtell, Lipton, Rosen & Katz Client Memorandum (Feb. 26, 2012).
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- 119. Maura R. Grossman (primary drafter), Appendix B to *In re: Pilot Project Regarding Case Mgmt. Techniques for Complex Civil Cases in the S.D.N.Y.*, Case No. 11-mc-00388-LAP, Standing Order 18-39 (Nov. 1, 2011).
- 120. Thomas Y. Allman, Jason R. Baron, and Maura R. Grossman, *Preservation, Search Technology, and Rulemaking*, Submission to the Advisory Committee on the Rules of Civil Procedure Governing the U.S. Federal Courts 319-33 (2011), included in <a href="https://www.uscourts.gov/sites/default/files/fr\_import/CV2011-11.pdf">https://www.uscourts.gov/sites/default/files/fr\_import/CV2011-11.pdf</a> as Appendix N.
- 121. George T. Conway III and Maura R. Grossman, Brief for *Amicus Curiae* Chamber of Commerce of the United States of America in Support of Defendant's Objections to the Magistrate Judge's October 11, 2011 Order, *Pippens* v. *KPMG LLP*, Case No. 11 Civ. 0377 (CM) (JLC) (S.D.N.Y. Nov. 4, 2011), reprinted in Brad Harris and Hon. Ronald J. Hedges (eds.), Preservation and Proportionality: Perspectives on Lowering the Burden of Preserving Data in Civil Litigation, Legal Holds Pro Signature Series Appendix, 32-36 (Nov. 2011).

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- 123. Peter C. Hein, Wayne M. Carlin, and Maura R. Grossman, *U.S. Supreme Court Holds That Corporations Do Not Have a "Personal Privacy" Interest Assertable Under Freedom of Information Act Exemption*, 30 Securities Reform Act. Litig. Reporter 759 (2011), 46 Bank and Corp. L. Reporter 148 (2011), and The Harvard L. School Forum on Corp. Gov. and Fin. Reg. (Mar. 27, 2011).
- 124. Maura R. Grossman, *Proportionality Isn't the Challenge, Operationalizing It Is*, in Brad Harris and Hon. Ronald J. Hedges (eds.), Preservation and Proportionality: Perspectives on Lowering the Burden of Preserving Data in Civil Litigation, Legal Holds Pro Signature Series 17-18 (Nov. 2011).
- 125. Maura R. Grossman, *Pension Committee: A Catalyst for Change in the Federal Rules*, in Brad Harris and Hon. Ronald J. Hedges (eds.), Pension Committee Revisited One Year Later: A Retrospective on the Impact of Judge Scheindlin's Influential Opinion, Legal Hold Pro Signature Series 30 (Feb. 2011).
- 126. Peter C. Hein and Maura R. Grossman, *Federal Judge Rules Specified Fields of Metadata Must Be Produced*, Wachtell, Lipton, Rosen & Katz Client Memorandum (Feb. 9, 2011).
- 127. Gordon V. Cormack, Maura R. Grossman, Bruce Hedin, and Douglas W. Oard, *Overview of the TREC 2010 Legal Track*, in Ellen M. Voorhees and Lori P. Buckland, The Nineteenth Text REtrieval Conference ("TREC 2010") Proc., NIST Special Pub.: SP 500-294, 1-45 (2010).
- 128. Jeremy R. Feinberg and Maura R. Grossman, *Intro to Cloud Computing and Its Ethical Implications—Is There a Silver Lining?*, The N.Y. Prof'l Responsibility Report ("NYPRR"), 1, 7-10 (May 2010).
- 129. Maura R. Grossman, N.Y. Unified Court System Releases E-Discovery Report With Recommendations That Bode Sweeping Changes for E-Discovery Management in State's Courts, 10(4) Digital Discovery & E-Evidence Reports 83-4 (2010).
- 130. Maura R. Grossman, New York State Unified Court System Releases E-Discovery Report Recommendations Bode Sweeping Changes in E-Discovery Management, Wachtell, Lipton, Rosen & Katz Client Memorandum (Mar. 22, 2010).
- 131. Ann Marie Gibbs, Maura R. Grossman, and Babette V.E. Orenstein, *Rule 45 Subpoenas and Non-Party Production Issues: Assessing the Burdens and Costs and Avoiding the Pitfalls*, 1-11 (Lorman Education Services 2010).
- 132. Maura R. Grossman, "*Utmost Seriousness*" *Necessary in Preservation of Electronic Evidence*, The Harvard L. School Forum on Corp. Gov. and Fin. Reg. (2 pages) (Feb. 16, 2010).
- 133. Maura R. Grossman and Hon. Ronald J. Hedges, *Do the Federal Rules Provide For Clawless* "Clawbacks"?, 9(9) Digital Discovery and E-Evidence (3 pages) (2009).
- Hon. Ronald J. Hedges and Maura R. Grossman, *An Addendum to "Case Management and E-Discovery: Perfect Together?"*, 9(8) Digital Discovery & E-Evidence Report 262-63 (2009).
- 135. Peter C. Hein, Meyer G. Koplow, and Maura R. Grossman, *Implementation of Document Retention Policy Deemed Spoliation*, Wachtell, Lipton, Rosen & Katz Client Memorandum (Jan. 20, 2009).

- 136. Kevin F. Brady and Maura R. Grossman, *Mapping the Steps of the E-Discovery Process*, Georgetown Law E-Discovery Training Academy 1-4 (2009).
- 137. Peter C. Hein, Eric M. Roth, and Maura R. Grossman, Federal Rule of Evidence 502, Limiting Waiver of Attorney-Client and Work-Product Privileges, Signed Into Law, 26 Securities Reform Act. Litig. Reporter 49 (2008) and 41 Bank and Corp. Gov. L. Reporter 331 (2008).
- 138. Maura R. Grossman (primary drafter), *A Lawyer's Ethical Obligations to Retain and to Provide a Client with Electronic Documents Relating to a Representation*, The Ass'n of the Bar of the City of N.Y. Committee on Prof'l and Judicial Ethics Formal Op. 2008-1 1-7 (July 2008).
- 139. Peter C. Hein, Eric M. Roth, Maura R. Grossman, and Danielle L. Rose, *Proposed Rule of Evidence 502, Limiting Waiver of Attorney-Client and Work-Product Privileges, Advances Towards Congressional Approval*, Wachtell, Lipton, Rosen & Katz Client Memorandum (Dec. 26, 2007).
- 140. Maura R. Grossman (primary drafter), *Corporate-Family Conflicts, Duty of Loyalty, and Duty to Preserve Confidences and Secrets*, The Ass'n of the Bar of the City of N.Y. Committee on Prof'l and Judicial Ethics Formal Op. 2007-3 1-7 (Sept. 2007).

## PRESENTATIONS, SEMINARS, AND WEBINARS 2008 - PRESENT

As a practicing lawyer, much of my scholarly work has been in the form of talks in various settings, including training sessions for judges and government lawyers, and presentations at law schools, bar association events, and industry conferences.

- 1. "Guide to Navigating AI and Its Ethical Challenges," with Jenny Cieplak, Daniel B. Garrie, and Karen Silverman, Thomson Reuters/WestLegalEd and Legal Cyber Academy Webinar (Jan. 5, 2024).
- 2. "Ethical Issues to Consider When Incorporating AI Into Your Practice," American Association for Justice ("AAJ") AI Task Force Webinar (Jan. 18, 2024).
- 3. "The Impact of Deepfakes on the Justice System," with Hany Farid and Hon. Paul W. Grimm, Webinar Co-Sponsored by the American Bar Association ("ABA") Task Force on Artificial Intelligence and the Bolch Judicial Institute at Duke Law School (Jan. 22, 2024).
- 4. "Let's Talk AI: Responsible AI with Maura R. Grossman," with Harold Godwin, Waterloo Artificial Intelligence ("AI") Institute Podcast Series (Jan. 25, 2024).
- 5. "Artificial Intelligence: Part I," with Hon. Paul W. Grimm, Order in the Court Podcast Episode 7, Bolch Judicial Institute at Duke University Law School (Jan. 25, 2024).
- 6. "Artificial Intelligence: What Do Judges Need to Know?," with Hon. David Masuhara, National Judicial Institute ("NJI") National Insolvency Law Seminar (Vancouver, BC Feb. 1, 2024).
- 7. "Fundamentals of AI, Generative AI, and Deepfakes: What Disciplinary Counsel Need to Know," National Council of Lawyer Disciplinary Boards ("NCLDB") 2024 Annual Meeting and Conference (Feb. 9, 2024).

- 8. "Artificial Intelligence in Healthcare: Challenges and Opportunities," with Michael Cary, Kathleen McGrow, and Keith Weiner, New York Academy of Medicine Sixth Annual Health Informatics Conference in Collaboration with the Nursing Section (Feb. 12, 2024).
- 9. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice Course, at the Maurice A. Deane School of Law of Hofstra University (Feb. 15, 2024).

- 10. "An Introduction to Legal Technology," with Terry Laukkanen and Daniel Meyers, 2023 Placement Intensives Training Session, Lincoln Alexander School of Law at Toronto Metropolitan University (Jan. 11, 2023).
- 11. Ethics and Explainability of AI Algorithms in Legal Use Cases," with Doug Austin, Mary Mack, and Tom O'Connor, Electronic Discovery Reference Model ("EDRM") Webinar (Jan. 11, 2023).
- 12. "The 411 on Special Masters and Discovery Mediators," with Hon. Iain Johnston, Hon. Kristen L. Mix, Hon. Andrew J. Peck, and Jay Yelton III, Electronic Discovery Reference Model ("EDRM") Webinar (Feb. 6, 2023).
- 13. "Processing and Early Case Analysis: Best Practices for Culling, Analysis, and Processing," with Chuck Rothman, Osgoode Certificate in E-Discovery, Information, and Privacy Program, Osgoode Professional Development (Feb. 7, 2023).
- 14. "Does Forensic Sketch AI-rtist Pass the NIST Risk Management Test for Trustworthy AI?," National Science and Engineering Research Council ("NSERC") Collaborative Research and Training Experience ("CREATE") Lecture Series on Responsible AI (Feb. 16, 2023).
- 15. "Fundamentals of Technology-Assisted Review for eDiscovery," Guest Lecture at Tessa Jacob's and Robin Perkins' Electronic Discovery Course at the University of Missouri-Kansas City School of Law (Feb. 23, 2023).
- 16. "Algorithms, Bots, and Creating Data with Artificial Intelligence," with Kenya Parrish-Dixon and Ari Kaplan, Association of Certified eDiscovery Specialists ("ACEDS") Webinar Series (Feb. 24, 2023).
- 17. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice Course, at the Maurice A. Deane School of Law of Hofstra University (Feb. 27, 2023).
- 18. "Fundamentals of Artificial Intelligence and Issues of Bias," Osgoode Certificate in E-Discovery, Information, and Privacy, Osgoode Professional Development (Feb. 28, 2023).
- 19. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, BLG Tech Talk, Q1 2023 Digital Hub (Mar. 8, 2023).
- 20. "Synthetic Health Data: Opportunities and Challenges for Greater Collaboration in Healthcare," with Daniel Blumenthal, Michael Duong, and Alan Forster, University of Waterloo Centre for Bioengineering and Biotechnology ("CBB") and University of Waterloo Cybersecurity and Privacy Institute ("CPI") Conference on Wasterloo for Health, Technology, and Society Day 2: Ensuring Safe Technology

- (Waterloo, ON Mar. 9, 2023).
- 21. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at Cameron Shelly's Artificial Intelligence and Society: Impact, Ethics, and Equity Course, at the University of Waterloo (Mar. 21, 2023).
- 22. "The Limitations and Misuses of Information Retrieval in Legal Cases," Keynote Address at the First International Workshop on Legal Information Retrieval ("Legal IR") and the Second Workshop on Augmented Intelligence for Technology-Assisted Systems: Evaluation Metrics and Protocols for eDiscovery and Systematic Review Systems ("ALTARS"), at the 45th European Conference on Information Retrieval ("ECIR 2023") (Dublin, Ireland Apr. 2, 2023).
- 23. "Opportunities to Improve the State of the Art in Technology-Assisted Review ("TAR") for eDiscovery," with Gordon V. Cormack and Andrew Harbison, Presentation to Grant Thornton Germany, Ireland, United Kingdom, and United States (Apr. 4, 2023).
- 24. "Navigating the Risks of Generative AI: An Expert Panel Discussion," with Mary Mack, Johannes ("Jan") C. Scholtes, and John Tredennick, Electronic Discovery Reference Model ("EDRM") Ripped-From-the-Headlines Flash Webinar Series (Apr. 6, 2023).
- 25. "Some Comments on Artificial Intelligence and Chat GPT," with Hon. Allison H. Goddard, The Louis M. Welsh Inn of Court (San Diego, CA Apr. 12, 2023).
- 26. "Fundamentals of Technology-Assisted Review ('TAR') for eDiscovery," Guest Lecture at Craig Ball's Electronic Discovery and Digital Evidence Course at the University of Texas at Austin School of Law (Apr. 19, 2023).
- 27. "Limitations and Misuses of Information Retrieval Methods in Legal eDiscovery," Artificial Intelligence at Thomson Reuters ("AI@TR") Invited Speaker Series (May 2, 2023).
- 28. "Synthetic Health Data as a Potential Enabler of Trust," Keynote Address at the University of Waterloo WatSPEED, Statistics Canada, Canadian Institute for Health Information ("CIHI"), and Canadian Institute of Public Administration ("IPAC") Executive Dinner and Roundtable Discussion on Enabling Trust Within Canada's Data Strategy (Ottawa, ON May 4, 2023).
- 29. "Artificial Intelligence in Litigation, Arbitration, and Mediation," with Colin Rule and James Sharer, New York State Bar Association ("NYSBA") Commercial and Federal ("ComFed") Litigation Section Spring Meeting (Philadelphia, PA May 7, 2023).
- 30. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, District of Nevada Annual Federal District Court Conference: Federal Practice Basics and Beyond (Reno, NV May 11, 2023).
- 31. "Search and Review: Techniques, Protocols, and Validation, with Jeffrey J. Fowler and Stanley M. Gibson, Practicing Law Institute ("PLI") Program on Hot Topics in Electronic Discovery 2023: What Corporate and Outside Counsel Need to Know (New York, NY May 18, 2023).
- 32. "Cybersecurity and Healthcare," with Brian Levine, Michael Saylor, Michael Saylor, and Ryan Weydeck, A Cyber Future Foundation ("CFF") Global Town Hall (May 23, 2023).
- 33. "Small Breakout Session on Strategic Considerations and Practical Guidance From Key Players and Judges: Special Masters," with Hon. Dan Polster and David R. Cohen, Bolch Judicial Center and Duke

- Law School's Advanced Certificate Program in Mass Tort Multidistrict Litigation ("MDL") (Durham, NC May 25, 2023).
- 34. "Achieving Trustworthy AI: Is It Possible?," Guest Lecture at Helen Chen's and Zahid Butt's Graduate Course on Machine Learning and Artificial Intelligence in Public Health and to the Faculty of Applied Health Sciences, University of Waterloo School of Public Health (Waterloo, ON May 31, 2023).
- 35. "The Impact of Artificial Intelligence and Advanced Technology on the Law and Judging," with Hon. Paul W. Grimm and Lee Tiedrich, Hon. Paul W. Grimm's, David F. Levy's, and Hon. Lee Rosenthal's Judges Seminar in the Judicial LLM Program at the Bolch Judicial Center of Duke Law School (Durham, NC June 2, 2023).
- 36. "Latest Tools and Updates for E-Discovery," with Crystal O'Donnell, Chuck Rothman, and Rocco G. Scocco, Ontario Bar Association ("OBA") TECHxpo Conference: Maximizing Your Practice's Performance (Toronto, ON June 9, 2023).
- 37. "The Equitable Use of Artificial Intelligence and Machine Learning in Healthcare," with Emma Bluemke, Animesh Garg, Yan Fossat, Jessica Morley, Mohamed ("Mo") Musbah, Bo Wang, Alexander Wong, and Azadeh Yadollahi, The Centre for Digital Therapeutics ("CDTx"), University Health Network ("UHN") and University College London Roundtable (June 15, 2023).
- 38. "The Generative Defence Lawyer: What You Need to Know About AI Right Now," with Susie Lindsay, Canadian Defence Lawyers ("CDL") 25th Anniversary Annual General Meeting and Conference on The Evolution of Resilience: Preparing Your Defence Practice to Meet Social, Technical, and Economic Change Agents (Mono, ON June 16, 2023).
- 39. "E-Discovery 101: How to Gather and Use Electronically Stored Information," with Dean DiPilato, Hon. Timothy S. Driscoll, Hon. Ronald J. Hedges, and Gina Sansone-Driscoll, New York State Bar Association Technology and eDiscovery Committees Joint Continuing Legal Education ("CLE") Webinar (June 20, 2023).
- 40. "Challenges, Opportunities and Worries The Responsible Use of Generative AI," with David Mhlanga, Mausam Mausam, Helen Titilola Olojede, and John Traxler, Commonwealth of Learning ("COL") Online Panel Discussion (June 22, 2023).
- 41. "Trials and Tribulations of Conducting and Evaluating a Massive Document Review: Common Errors, Best Practices, and Lessons Learned," with Gordon V. Cormack, Workshop on Electronic Discovery, 19th International Conference on Artificial Intelligence and the Law ("ICAIL 2023") (June 23, 2023).
- 42. "Generative AI: Unpacking the Legal Technology Revolution," with Carolyn Anger, Gordon V. Cormack, and Xavier Diokno, The Master's Conference Toronto 2023 (Toronto, ON June 27, 2023).
- 43. "AI-Generated Evidence and ChatGPT Judgments," with Kelly Friedman, The Master's Conference Toronto 2023 (Toronto, ON June 27, 2023).
- 44. "Fundamentals of Artificial Intelligence for Lawyers and Legal Professionals," Georgetown Advanced eDiscovery Institute Pre-Conference Webinar (July 18, 2023).
- 45. "Leaving No One Behind: A case study on SDG9 to advance equity-based access to education and careers in cybersecurity for Canadians of African Descent," with Candies Kotchapaw and Mohammad Mousa, High-Level Political Forum ("HLPP") 2023 on Sustainable Development, United Nations

- Economic and Social Council ("UN-ESOC") (July 19, 2023).
- 46. "E-thics: A Lawyer's Guide to Navigating eDiscovery Ethics," with Daniel B. Garrie, Michael A. Sherman, and Hon. Randa Trapp, Joint Thomson Reuters (WestLegalEd), Global Cyber Institute, Legal Cyber Academy, and Lexeprint Webinar (July 20, 2023).
- 47. "The GPTJudge: Justice in an AI World Part I Fundamentals of Artificial Intelligence," The International Association of LGBTQ+ Judges," (Chicago, IL July 24, 2023).
- 48. "The GPTJudge: Justice in an AI World Part II Artificial Intelligence and Bias: Impact on the Courts," The International Association of LGBTQ+ Judges," (Chicago, IL July 24, 2023).
- 49. "The GPTJudge: Justice in an AI World Part III Artificial Intelligence and Deepfakes as Evidence," The International Association of LGBTQ+ Judges," (Chicago, IL July 24, 2023).
- 50. "Industry 4.0 Technology and the Digital Divide," with Feyisayo Enuiyin, Seun Richards, Oriando Sitcheran, and Jasmine Swimmer, Developing Young Leaders of Tomorrow Today ("DYLOTT") 2023 Black Diplomacy Global Summit (Toronto, ON July 28, 2023).
- 51. "Reputational Ruin in Eight Seconds The New AI Identity Theft," with Kym Geddes, Jeff Musson, Mike Pollack, and Rob Sciglimpaglia, Episode 7, Third Season of 1: Click 2: Cyber Chaos ("1C2CC") Podcast (August 2, 2023).
- 52. "Benefits and Limitations of ChatGPT and Other Forms of Generative AI," Presentation to the Faculty and Staff of the University of Waterloo School of Accounting and Financial Management (Waterloo, ON Aug. 2, 2023).
- 53. "Part I: Fundamentals of AI," Guest Lecture at Jatin Nathwani and Ann Fitz-Gerald's Graduate Summer School Course on Technology Governance, Balsillie School of International Affairs ("BSIA") (Waterloo, ON Aug. 16, 2023).
- 54. "Part II: Achieving Responsible AI," Guest Lecture at Jatin Nathwani and Ann Fitz-Gerald's Graduate Summer School Course on Technology Governance, Balsillie School of International Affairs ("BSIA") (Waterloo, ON Aug. 16, 2023).
- 55. "Science, Not Art: Information Retrieval in Search and Review," with Gordon V. Cormack and Bruce Hedin, ILTACON 2023 (Orlando, FL Aug. 21, 2023).
- 56. "Fundamentals of Generative AI for Judges," with Hon. Michael Berg, Hon. Allison Goddard, Gary Osborne, and Alex Tievsky, Judicial Education Program for the United States District Court for the Southern District of California (San Diego, CA Sept. 13, 2023).
- 57. "Generative AI: Hopes and Risks for Transformational Technology," with Aaron B. Bath, Brian Corbin, Hon. Ronald J. Hedges, and Deborah Jones, Industry and Leadership Track, XChange Conference Sponsored by Exterro and Zapproved (New Orleans, LA Sept. 20, 2023).
- 58. "Way Too Smart? Ethical Quandaries and the Use of AI," with Jan L. Jacobowitz, Greg Siskind, and David Ware, Federal Bar Association ("FBA") Annual Conference (Memphis, TN Sept. 22, 2023).
- 59. "Fundamentals of Artificial Intelligence and Issues of Bias," Federal Courts Advocate Section of the Kansas City Metropolitan Bar Association ("KCMBA") and United States District Court for the District

- of Kansas Joint Continuing Legal Education ("CLE") Program (Kansas City, MO Sept. 27, 2023).
- 60. "The Legal Argument for GenAI to Exist in Law, with Andrew Camel, OpenView Venture Capital's Closing the Loop Podcast (Sept. 28, 2023).
- 61. "The Artificial Lawyer: What You Need to Know About AI, Generative AI, and Bias," National eDiscovery Leadership Institute ("NeLI") (Kansas City, MO Sept. 28, 2023).
- 62. "The Ethical Implications and Potential Job Replacement Associated with AI (LLMs)," with Cathy Cobey, Mei Nagappan, and Theo Stratopolus, University of Waterloo Centre for Information Integrity and Systems Assurance ("UW-CISA") 13th Biennial Symposium (Sept. 30, 2023).
- 63. "Balancing the Needs of Requesting and Producing Parties Getting eDiscovery Right: Best Practices and Next Steps," with James Anderson, Robert A. Clifford, Hon. Joy Flower Conti, and Hon. Iain D. Johnston, RAND Institute for Civil Justice ("ICJ") Symposium (Washington, DC Oct. 4, 2023).
- 64. "The Use of Generative AI by Defence Lawyers: Capability and Culpibility," with Heather Sanderson and Richard Susskind, Joint Canadian Defence Lawyers ("CDL") and Forum of Insurance Lawyers ("FOIL") Webinar (Oct. 5, 2023).
- 65. "The Rise of AI: Finding Human Design in a Growing Digital World," with Gregg Springan and Marianela Luppa, Special Keynote Panel, American Academy of Nursing 2023 Health Policy Conference (Washington, DC Oct. 5, 2023).
- 66. "AI Ethics in Higher Education," with Stephanie Laggini Flore, Robbie K. Melton's OpenAI Graduate Course offered through the Tennessee State University ("TSU") SMART Global Innovative Technologies Division (Oct. 6, 2023).
- 67. "Trick or Treat? Unmasking AI Disinformation and Manipulation While Revealing Key Legal Issues," with Theodore F. Claypoole, Bruce de'Medici, and Michael Simon, American Bar Association ("ABA") Section of Science and Technology Law Fifth Annual Artificial Intelligence and Robotics Institute (Santa Clara, CA Oct. 10, 2023).
- 68. "Adjudicating at the Edge of Law and Technology," with Hon. Paul W. Grimm and Chuck Kellner, Plenary Session at Everlaw Summit 2024 (San Francisco, CA Oct. 12, 2023).
- 69. "JeopTARdy!," with Leonard Aragon, Jason S. Hartley, and Christopher King, American Bar Association ("ABA") 2023 Class Actions Institute (Chicago, IL Oct. 19, 2023).
- 70. "Fundamentals of Artificial Intelligence for Lawyers and Legal Professionals," Electronic Discovery Reference Model ("EDRM") Webinar (Oct. 23, 2023).
- 71. "Artificial Intelligence and the Justice System: A Primer," Ontario Court of Justice North Regional Seminar, National Judicial Institute ("NJI") (Sudbury, ON Oct. 25, 2023).
- 72. "Generative AI, Deepfakes, and the Need for Revised Federal Rule of Evidence 901(b)," with Hon. Paul W. Grimm, Meeting of the U.S. Judicial Conference's Advisory Committee of the Federal Rules of Evidence (Minneapolis, MN Oct. 27, 2023).

- 73. "Emerging Evidentiary Issues in the Digital Age," with Yohance Bowden, Julia P. Kuan, and James A. Sharer, Practicing Law Institute ("PLI") 2023 Trial Evidence Program (New York, NY Oct. 30, 2023).
- 74. "Nightmare on Review Street: Horror Stories of Managed Review," with Chris Baker, Mary Mack, and Biordy Meyers," Purpose Legal and Electronic Discovery Reference Model ("EDRM") Joint Webinar (Oct. 30, 2023).
- 75. "Artificial Intelligence: The Basics," New York State Commercial Division Annual Eileen Branston Institute on Complex Commercial Litigation (New York, NY Nov. 1, 2023).
- 76. "Evidence Issues Presented by Artificial Intelligence," with Daniel Capra and Jeremy R. Feinberg, New York State Commercial Division Annual Eileen Branston Institute on Complex Commercial Litigation (New York, NY Nov. 1, 2023).
- 77. "Achieving Trustworthy AI: Is It Possible Today?," Academic Keynote at University of Waterloo Fall 2023 Math and Computing Research Discovery Day on Mitigating Risks of AI (Waterloo, ON Nov. 2, 2023).
- 78. "Artificial Intelligence as Evidence: What Judges and Lawyers Need to Know," with Hon. Paul W. Grimm, Eastern District of Arkansas Bench and Bar Conference in G. Thomas Eisele (Little Rock, AS Nov. 3, 2023).
- 79. "Generative AI and Deepfakes in the Justice System," U.S. Department of Justice ("DOJ") Civil Division Training Program (Nov. 7, 2023).
- 80. "Fundamentals of Artificial Intelligence and Issues of Bias: What Every Law Student Should Know," Guest Lecture at Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Nov. 9, 2023).
- 81. "AI and the Legal Profession," with Ralph Carter, Hon. P. Kevin Castel, Ignatius Grande, Moya Novella, and Hon. James M. Wicks, New York State Bar Association ("NYSBA") Commercial and Federal ("ComFed") Litigation Section Program, St. John's University Law School (New York, NY Nov. 13, 2023).
- 82. "Emerging Issues with AI and the Law," Keynote Address, 15th Annual Gibbons E-Discovery Conference (West Orange, NJ Nov. 16, 2023).
- 83. "The Value of Special Masters in E-Discovery," with Hon. James C. Francis, IV, Hon. Kristen L. Mix, and Mark S. Sidoti, 15th Annual Gibbons E-Discovery Conference (West Orange, NJ Nov. 16, 2023).
- 84. "AI-Generated Documents and Admissibility," with Tam C. Boyar and Hon. David A. Crerar, eDiscovery and Electronic Evidence 2023 Program, Continuing Legal Education Society of British Columbia ("CLEBC") (Nov. 20, 2023).
- 85. "AI in the Courtroom for North Dakota Judges," with Hon. Paul W. Grimm, Fall Conference for the Trial Judges of North Dakota (Bismark, ND Nov. 21, 2023).
- 86. "Admitting and Challenging AI as Evidence What are the Frameworks/Considerations for Adjudicators to Accept AI-Generated Evidence," with Kelly Friedman, Hon. Paul W. Grimm, and Hon. Mohan Sharma, Joint Ontario Bar Association ("OBA") / Sedona Working Group 7 ("Sedona Canada") Digital

- Evidence and eDiscovery ("DEED") Conference (Toronto, ON Nov. 22, 2023).
- 87. "Sedona Canada Update," with Chris Walker, Joint Ontario Bar Association ("OBA") / Sedona Working Group 7 ("Sedona Canada") Digital Evidence and eDiscovery ("DEED") Conference (Toronto, ON Nov. 22, 2023).
- 88. "Achieving Trustworthy or Responsible AI: Is It Possible?," Guest Lecture at Cameron Shelley's Graduate Course on AI and Society, University of Waterloo Centre for Society, Technology and Values (Waterloo, ON Nov. 24, 2023).
- 89. "AI, Trust, and the Justice System," Osgoode Professional Development ("OPD") First Annual Forum on Artificial Intelligence and the Law (Toronto, ON Nov. 28, 2023).
- 90. "Adverse Responses to Science and Technology in the Academy," with Trevor Charles, Lai-Tze Fan, and Kelly Grinmod, University of Waterloo International Conference on Antagonism and Intimidation in Academia (Waterloo, ON Nov. 29, 2023).
- 91. "Incorporating AI Technology Into Your Corporate Legal Practice: Evaluating the Practical and Ethical Implications," with Paul Gagnon, Al Hounsell, Hersh Perlis, and Sondra Rebenchuk, Module 5 of Canadian Bar Association ("CBA") Mastering Artificial Intelligence Skills for Corporate Lawyers Series (Dec. 2, 2023).
- 92. "Where's Waldo Generative AI,?" with Daniel G. Brown and Hon. Allison Goddard, Joint Electronic Discovery Reference Model ("EDRM") and Exterro Ninth Annual eDiscovery Day 2023 Webinar (Dec. 7, 2023).
- 93. "Semi-Annual Case Law Review: December 2023," with David Horrigan and Ari Kaplan, Association of Certified eDiscovery Specialists ("ACEDS") Webinar Series (Dec. 8, 2023).
- 94. "Litigation Transform-AI-tion: Possibilities, Pitfalls, and Responsible Practices," with Tara Emory and Hon. Xavier Rodriguez, American Law Institute ("ALI") Continuing Legal Education ("CLE") Webinar (Dec. 11, 2023).

- 95. "2021 State of AI and Technology Adoption in eDiscovery Study," with Johannes C. Scholtes and Sarai Schubert, IPRO, ZyLAB, and Association of Certified E-Discovery Specialists ("ACEDS") Webinar (Jan. 19, 2022).
- 96. "Progress, Possibility, and Purpose," with Ari Kaplan, Joy Muraro, Michael Quartararo, and Amy Sellars, Association of Certified E-Discovery Specialists ("ACEDS") 2022 Roundtable Series (Jan. 20, 2022).
- 97. "Creative Problem Solving: How to Use Special Masters," with Merril Hirsh, Hon. Kristen L. Mix, and Hon. Kaymani ("Kay") West, Academy of Court-Appointed masters ("ACAM") Continuing Legal Education ("CLE") Program for the United States Federal Magistrate Judges Association ("FMJA") (Jan. 27, 2022).
- 98. "The Fundamentals of Artificial Intelligence in Under An Hour," Practice Points Ontario Professional Development ("OPD") Program at Lenczner Slaght LLP (Jan. 28, 2022).

- 99. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Co-Sponsored by Northwestern University Pritzker School of Law's Law and Technology Initiative, AI@NU, High Tech Law Society, and Northwestern Journal of Technology and Intellectual Property (Feb. 3, 2022).
- 100. "The Admissibility of AI Evidence (in family Law Cases)," with Hon. Paul W. Grimm, Maryland State Bar Association ("MSBA") Family and Juvenile Law Section (Feb. 7, 2022).
- 101. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at John Tsiforis' Computer Technology and Legal Practice Course, at the Maurice A. Deane School of Law of Hofstra University (Feb. 14, 2022).
- 102. "Technical Matters: Opportunities and Challenges in Using AI in the Practice of Law," with Medina Abdelkader and Leslie McCallum, University of Alberta Faculty of Law 2022 Digital Law Forum on AI and the Law: Myths & Reality (Mar. 15, 2022).
- 103. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at Cameron Shelly's Artificial Intelligence and Society: Impact, Ethics, and Equity Course, at the University of Waterloo (Mar. 16, 2022).
- 104. "Achieving Trustworthy AI: Inherent Challenges," National Science and Engineering Research Counsel Collaborative Research and Training Experience ("NSERC CREATE") Program on Responsible AI (Feb. 18, 2021).
- 105. Negotiating TAR Protocols," with Tara Emory, Hon. Allison Goddard, and Mark Noel, Innovative Driven Webinar (Feb. 23, 2022).
- 106. Fundamentals of Technology-Assisted Review for eDiscovery," Guest Lecture at Tessa Jacob's and Robin E. Stewart's Electronic Discovery Course at University of Missouri-Kansas City School of Law (Feb. 24, 2022).
- 107. "AI/ML to Classify and Build Data Intelligence: Design and Approaches," with Priya Keshav, Meru Data Webinar (Mar. 2, 2022).
- 108. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Continuing Legal Education ("CLE") Program for the United States Federal Magistrate Judges Association ("FMJA") (Mar. 3, 2022).
- 109. "Fundamentals of Artificial Intelligence for Non-Computer Scientists," Zasio Enterprises, Inc. and Boise Valley Idaho Chapter of the Association of Records Managers and Administrators ("ARMA") International Virtual Coffee Program (Mar. 10, 2022).
- 110. "Are Reports of the Document's Demise Greatly Exaggerated?," with Thomas C. Gricks III, Alison A Grounds, Jeannine M. Kenney, and Martin Tully, The Sedona Conference Working Group 1 on Electronic Document Retention and Production Virtual Town Hall (Mar. 16, 2022).
- 111. "Is Tech Broken?," with Ricardo Baeza-Yates, Vijay Ganesh, and Cameron Shelley, Forum Co-Sponsored by the University of Waterloo u:wait Student Organization and the Waterloo Artificial Intelligence ("AI") Institute (Mar. 30, 2022).
- 112. "Artificial Intelligence as Evidence: What Judges Need to Know," with Hon. Paul W. Grimm, National Judicial College ("NJC") Webinar (Mar. 31, 2022).

- 113. "Email Searches—Valid or Not?," with Adeash A.J. Lakraj, National Employment Lawyers Association ("NELA") 2022 Spring Seminar on eDiscovery and ESI for the Plantiffs' Employment Lawyer (Chicago, IL Apr. 2, 2022).
- 114. "Fundamentals of Artificial Intelligence," Developing Young Leaders of Tomorrow Today ("DYLOTT") Black Diplomats Academy 2022 Learning Lab (Apr. 8, 2022).
- 115. "JeopTARdy," with Fatima Brizuela, Christopher Q. King, and Sarah LaFreniere, American Bar Association ("ABA") Litigation Section 2021 National Class Actions Institute (Austin, TX Apr. 12, 2022).
- 116. "Predictive Analytics," Colorado Bar Association Continuing Legal Education ("CBA-CLE") Program on Advanced E-Discovery (Apr. 14, 2022).
- 117. "Fundamentals of Technology-Assisted Review ('TAR') for eDiscovery," Guest Lecture at Craig Ball's Electronic Discovery and Digital Evidence Course at the University of Texas at Austin School of Law (Apr. 20, 2022).
- 118. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Federal eDiscovery Working Group ("FEDWG") Stand-Alone Webinar Series (Apr. 26, 2022).
- 119. "Personal Injury Litigation and AI App Data as Evidence: Ascertaining, Proving, Challenging Admissibility," with Hon. Paul W. Grimm, Strafford Publications Continuing Legal Education ("CLE") Program (Apr. 27, 2022).
- 120. "Everlaw Connect," with Chuck Kellner, Mary Mack, and Kaylee Walstad, The Electronic Discovery Reference Model ("EDRM") Illumination Zone Podcast (May 6, 2022).
- 121. "Discovery and Disclosure Q&A Trivia," 2022 Discovery and Disclosure Symposium for Government Agencies (Washington, DC May 11, 2022).
- 122. "Search and Review: Techniques, Protocols, and Validation," with Jeffrey Fowler and Stan Gibson, Practicing Law Institute ("PLI") Hot Topics in Electronic Discovery 2022: What the Corporate and Outside Counsel Need to Know Continuing Legal Education ("CLE") Program (New York, NY May 11, 2022).
- 123. "eDiscovery Case Law Update: The Beat Goes On," with Thomas Y. Allman, Phil Favro, David Gaston, Hon. Heather McShane, Anthony Petruzzi, and Hon. Michael L. Robinson, 15th Annual Sedona Conference Institute ("TSCI"): Pre-Trial Practice in a Post-Pandemic World (May 16, 2022).
- 124. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, National Association of Criminal Defense Lawyers ("NACDL") Fourth Amendment Center and the Samuelson Law, Technology, and Public Policy Clinic at the University of California Berkeley School of Law Continuing Legal Education ("CLE") Program on Unlocking the Black Box: Challenging Surveillance Tools and Technologies in Criminal Cases (Chicago, IL May 17, 2022).
- 125. "Establishing and Protecting (or Challenging) Privilege Claims," with Jeffrey Harradine, Hon. Andrew J. Peck, Todd Presnell, and Margot Want, 15th Annual Sedona Conference Institute ("TSCI"): Pre-Trial Practice in a Post-Pandemic World (May 18, 2022).

- 126. "Artificial Intelligence: Predicting the Impact on Litigating and Judging," with Hon. Paul W. Grimm, Guest Lecture at Hon. David F. Levi's and Hon. Lee H. Rosenthal's Judges' Seminar in the Judicial LLM Program at the Bolsch Judicial Center of Duke Law School (Durham, NC May 20, 2022).
- 127. "Fireside Chat: Hot Topics in Technology-Assisted Review," With Chuck Kellner, Keynote Address at Everlaw Connect Powered by the Electronic Discovery Reference Model ("EDRM") Event (Chicago, IL June 1, 2022).
- 128. "Artificial Intelligence and the Law," with Hon. Paul W. Grimm, Tutorial at the 35th Canadian Conference on Artificial Intelligence ("Canadian AI 2022") (June 2, 2022).
- 129. "Fundamentals of Artificial Intelligence and Bias: What Every Lawyer Should Know," National eDiscovery Leadership Institute 2022 (Kansas City, MO June 3, 2022).
- 130. "Preparing Students to Care About Responsible Technology," Dean's Lecture at the University of Waterloo Alumni Weekend (Waterloo, ON June 4, 2022).
- 131. "Fireside Chat: Hot Topics in Technology-Assisted Review," with Chuck Kellner, Keynote Address at Everlaw Connect Powered by the Electronic Discovery Reference Model ("EDRM") Event (New York, NY June 8, 2022).
- 132. "Achieving Trustworthy AI: Inherent Challenges," Guest Speaker at Robin Cohen's University of Waterloo Social Implications of Computing Course Session 1 (Waterloo, ON June 13, 2022).
- 133. "Achieving Trustworthy AI: Inherent Challenges," Guest Speaker at Robin Cohen's University of Waterloo Social Implications of Computing Course Session 2 (Waterloo, ON June 13, 2022).
- 134. "Fireside Chat: Hot Topics in Technology-Assisted Review, with Chuck Kellner, Keynote Address at Everlaw Connect Powered by the Electronic Discovery Reference Model ("EDRM") Event (Beverly Hills, CA June 15, 2022).
- 135. "Artificial Intelligence as Evidence," with Robert V. Clark and Hon. Paul W. Grimm, Robert V. Clark's Everyday Law Podcast at Howard County College (July 11, 2022).
- 136. "Artificial Intelligence and the Justice System: A Primer," with Gideon Chrisian, Paul-Erik Veel, and Hon. Michael McKelvey, National Judicial Institute ("NJI") Program on Judging Better, Judging Smarter (St. John's, Newfoundland and Labrador July 14, 2022).
- 137. "Artificial Intelligence and Analytics and Beyond," Law Practice Division of the American Bar Association ("ABA") Best of ABA Techshow Webinar (July 27, 2022).
- 138. "Artificial Intelligence and Bias Impact on the Courts," The National Judicial College ("NJC") Webinar (July 27, 2022).
- 139. "Ripped From the Headlines: The Mystery of the Mar-a-Lago Documents and the Special Master," with Mary Mack and Hon. Kristen L. Mix, Electronic Discovery Reference Model ("EDRM") Ripped-From-the-Headlines Flash Webinar Series (Sept. 7, 2022).
- 140. "Persuading Internal Stakeholders to Use eDiscovery technology," with Scott Cohen, Ari Kaplan, and Jeffrey S. Jacobson, Association of Certified eDiscovery Specialists ("ACEDS") Advisory Board

- Webinar Series (Sept. 9, 2022).
- 141. "Emerging Evidentiary Issues," with Yohance Bowden, Zoe Salzman, and James Sherer, Practicing Law Institute's ("PLI's") Trial Evidence 2022 (Sept. 13, 2022).
- 142. "Overcoming Illegitimate Objections to eDiscovery Based on Assertions of 'Disproportionality,'" with Kate Dunnington, Kentucky Justice Association ("KJA") Annual Conference (Cincinnati, OH Sept. 15, 2022).
- 143. "Trends and Predictions: Future of Corporate Discovery," with Mira Edelman, Cecil Lynn, Sarah Sawvell, and Allison Stanton, Zapproved Eleventh Annual Conference on Preservation Excellence ("PREX 2022") (Portland, OR Sept. 21, 2022).
- 144. "Humans vs. Machines: Who Wins?" with William ("Bill") Hamilton, Ari Kaplan, and Alvin Lindsay, Association of Certified eDiscovery Specialists ("ACEDS") Advisory Board Webinar Series (Sept. 23, 2022).
- 145. "TAR Jeopardy a/k/a JeopTARdy," with Jason Hartley and Megan E. Jones, Brown Bag Lunch Program for the Judges of the United States District Court for the Southern District of California (Sept. 28, 2022).
- 146. "Fundamentals of Technology-Assisted Review ('TAR') for eDiscovery," Guest Lecture at Hon. Xavier Rodriguez's Electronic Discovery Course at St. Mary's University School of Law (Oct. 3, 2022).
- 147. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, United States Attorney's Office for the Southern District of Texas Speakers Series (Oct. 6, 2022).
- 148. "Judges Panel," with Hon. Allison Goddard, Hon. Constantinos ("Deno") Himonas, Hon. Michael T. Liburdi, and Hon. Xavier Rodriguez, 11th Annual Arizona State University ("ASU")-Arkfeld eDiscovery Law and Technology Conference 2022 (Phoenix, AZ Oct. 12, 2022).
- 149. "Trust But Verify, But How?" with Jeannine Kenney, Hon. Xavier Rodriguez, and Joy Woller, 11th Annual Arizona State University ("ASU")-Arkfeld eDiscovery Law and Technology Conference 2022 (Phoenix, AZ Oct. 12, 2022).
- 150. "A Primer on Race, Law, and Artificial Intelligence for Judicial Educators," with Timnit Gebru, Hon. Paul W. Grimm, Michael Roosevelt, and Joseph R. Sawyer, National Association of State Judicial Educators ("NASJE") (New Orleans, LA Oct. 24, 2022).
- 151. "Data Ethics, Data Exchange, and eDiscovery," with John Barkett, Mary Mack, and Clayton Romera, World Ethical Data Forum ("WEDF") 2022 (Oct. 27, 2022).
- 152. "Peer into the Future of eDiscovery," with David R. Cohen, Chuck Kellner, and Hon. Xavier Rodriguez, Everlaw 2022 Summit: Leading Through Change (San Francisco, CA Nov. 3, 2022).
- 153. "Technical Competence?" What the Heck Do You Mean?" with Xavier Rodriguez and Clayton Romera, Everlaw Summit: Leading Through Change (San Francisco, CA Nov. 3, 2022).
- 154. "Fundamentals of Artificial Intelligence and Issues of Bias: What Every Law Student Should Know," Guest Lecture at Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Nov. 10, 2022).

- 155. "The 411 on Special Masters and Discovery Mediators," with Hon. Kristen L. Mix, Hon. Andrew J. Peck, and Jay Yelton III, Electronic Discovery Reference Model ("EDRM") Eighth Annual eDiscovery Day Webinar (Dec. 1, 2022).
- 156. "The Privilege Log Conundrum: Law, Technology, and Strategy," with Hon. Paul W. Grimm, United States Department of Justice ("DOJ") Civil Division Continuing Legal Education ("CLE") Program (Dec. 15, 2022).

- 157. "Your Ethical Obligation to be Competent and Stay Current on New Technologies," with Hon. Ronald J. Hedges, New York State Bar Association ("NYSBA") Continuing Legal Education ("CLE") Program (Feb. 3, 2021).
- 158. "Evaluation of Legal Technology for eDiscovery: Lessons Learned and Paths Forward," Computation and Legal Services Panel with Kevin Ashley, Aloni Cohen, Douglas Downey, Jason Hartline, and Daniel W. Linna Jr., Northwestern Law and Technology Initiative ("LTI") and Northwestern Journal of Technology and Intellectual Property ("JTIP") Law + Computation Academic Symposium (Feb. 5. 2021).
- 159. "Hot Topics in Electronic Discovery: Fundamentals of Technology-Assisted Review," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice Course, Maurice A. Deane School of Law at Hofstra University (Feb. 11, 2021).
- 160. "Artificial Intelligence as Evidence," with Thomas A. Bernard and Hon. Paul W. Grimm, National and Maryland Federal Bar Association ("FBA") Joint Continuing Legal Education ("CLE") Program (Feb. 24, 2021).
- 161. "Artificial Intelligence and the Practice of Law," with Shawnna M. Childress, Nicolas Economou, Gary Marchant, and Tessa K. Jacob, Tenth Annual Arizona State University ("ASU")-Arkfeld eDiscovery Law and Technology Conference (Mar. 11, 2021).
- 162. "Artificial Intelligence and Analytics in Litigation and Beyond," Litigation Track, American Bar Association ("ABA") TECHSHOW 2021 (Mar. 12, 2021).
- 163. "Navigating the Digital Age Together: An Expert Panel Discussion of the United Nations Roadmap for Digital Cooperation," with Robert Fay, Elvis M. Kenmoe, Frida Misago, and Mark Schaan, United Nations Association in Canada ("UNA-C") Balsillie School of International Affairs ("BSIA") 2021 Speakers Series (Mar. 24, 2021).
- 164. "Using Artificial Intelligence to Find Legal Evidence and COVID-19 Treatments," Waterloo.AI and Advanced Manufacturing Consortium ("AMC") Industry Day (Mar. 25, 2021).
- 165. "Fundamentals of Artificial Intelligence and Issues of Bias: What Every Law Student Should Know," Guest Lecture at Brian Donnelly's and Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Apr. 1, 2021).
- 166. "Laying the Foundation: Getting Your AI Evidence In," with Hon. Paul W. Grimm, New York State Bar Association ("NYSBA") Continuing Legal Education ("CLE") Program (Apr. 5, 2021).
- 167. "Ethical Implications of Working Remotely and Online Collaboration," with Shawndra G. Jones, Scott L. Malouf, and Sari Montgomery, New York State Bar Association ("NYSBA") Continuing Legal

- Education ("CLE") Program on Technology and Legal Ethics: What Every Lawyer Should Know (Apr. 14, 2021).
- 168. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Maryland State Bar Association ("MSBA") 2021 Legal Summit Series and Annual Meeting (Apr. 20, 2021).
- 169. "Fundamentals of Technology-Assisted Review for eDiscovery," Trial Guides Webinar (Apr. 27, 2021).
- 170. "Unexpected Challenges on the Road to Quantitative Empirical Evaluation of Legal Technology," with Cary Colgianese, Joan Feigenbaum, and J.J. Prescott, Northwestern University / Toyota Technological Institute at Chicago / University of Chicago Institute for Data, Econometrics, Algorithms, and Learning ("IDEAL") Special Quarter on Data Science and Law Workshop on Evaluation and Accountability: Technologies for Law (Apr. 30, 2021).
- 171. "The Ethics of Automated Warfare and Artificial Intelligence," with Robert C. Engen, Matthew Kellett, and Bessma Momani, University of Waterloo Defense and Security Foresight Group, University of Waterloo AI ("Artificial Intelligence") Institute, and North American and Arctic and Defense and Security Network ("NAADSN") Webinar Series (May 4, 2021).
- 172. "Search and Review: Techniques, Protocols, and the Use of Neutrals in E-Discovery Practice," with Hon. James C. Francis IV and Stanley M. Gibson, Hot Topics in Electronic Discovery 2021: What Corporate and Outside Counsel Need to Know, Practicing Law Institute ("PLI") (May 5, 2021).
- 173. "Artificial Intelligence and the Future of Lawyering," with Anthony E. Davis, Sarah Jo Hamilton, James B. Koback, Jr., Joseph Samberra, and Katherine Strandburg, New York County Lawyers Association ("NYCLA") Continuing Legal Education ("CLE") Institute Webinar (May 12, 2021).
- 174. "Welcome to the Machine: Technology-Assisted Review ('TAR') at the Library of Virginia, with Roger Christman and Gordon V. Cormack, Best Practices Exchange 2021 ("BPE2021") / Council of State Archives ("CoSA") Annual "Unconference" on Adopting and Evolving Digital Initiatives (May 19, 2021.
- 175. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm and Michael Smoyer, Keynote Address at the Digital Government Institute ("DGI") Virtual eDiscovery Conference (May 20, 2021).
- 176. "Lessons in Leadership," Developing Young Leaders of Tomorrow Today ("DYLOTT") Black Diplomats Academy 2021 (May 30, 2021).
- 177. "Using Machine learning to Find Relevant Documents in Electronic Discovery and Other Fields," Symposium on Artificial Intelligence and Law ("SAIL") 2021 (June 3, 2021).
- 178. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, National Association of Criminal Defense Lawyers ("NACDL") / Cardozo National Forensics College ("NFC") 2021 Digital Week Talk, offered in conjunction with the Administrative Office of the United States Courts Defender Services Training Division (June 9, 2021).
- 179. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Keynote at the 2021 Kansas Bar Association ("KBA") Mid-Year Continuing Legal Education ("CLE") Meeting (June 11, 2021).
- 180. "Imagining Law and the Legal Profession in the Year 2030: How AI is Changing Legal Profession," Breakout Room and Report Back, at the 2d International Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace ("LegalAIIA2021"), in connection with the 18th

- International Conference on Artificial Intelligence and the Law ("ICAIL 2021") (June 21, 2021).
- 181. "June Conversations," with Mary Mack, Rob Robinson, and Kaylee Walstad, eDiscovery Lagniappe in conjunction with ComplexDiscovery on Clubhouse (June 24, 2021).
- 182. "A Fun Fact About Chapter 13: Vetting and Validation of AI-Enabled Tools for Electronic Discovery," Edmond Litigating AI Virtual Book Launch Party (June 24, 2021).
- 183. "Artificial Intelligence ('AI'): What Judges Have to Know," with David Engstrom, Nicolas Economou, and Hon. Katherine Forrest, National Judicial College Webinar for Judges of the Ukraine (June 30, 2021).
- 184. "The Ethics of AI in the Legal Profession," with Tess Blair, Legalweek(year) Virtual Series 5, Legal Automation Educational Track (July 14, 2021).
- 185. "Transitions, Transformations, and Triumphs: The Educational Perspective," with William ("Bill") Hamilton, Ari Kaplan, Michael Quartararo, and George Socha, Association of Certified E-Discovery Specialists ("ACEDS") Roundtable (June 20, 2021).
- 186. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Association of Certified E-Discovery Specialists ("ACEDS") (Aug. 10, 2021).
- 187. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, National Advocacy Center ("NAC") (Aug. 11, 2021).
- 188. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Young Lawyers Section of the Maryland State Bar Association ("MSBA") (Aug. 25, 2021).
- 189. "A Brief Introduction to Artificial Intelligence," National eDiscovery leadership Institute 2021 ("NeLI 2021") (Sept. 13, 2021).
- 190. "Emerging Evidentiary Issues in the Digital Age," with Yohance Bowden, Zoe Salzman, and James Sherer, Practicing Law Institute's ("PLI's") Trial Evidence 2021 (Sept. 14, 2021).
- 191. "Fundamentals of Technology-Assisted Review ('TAR") for eDiscovery," InforGov ("IG") World 2021 Conference (Sept. 16, 2021).
- 192. "Processing and Early Case Analysis: Best Practices for Culling, Analysis, and Processing," with Chuck Rothman, Osgoode Professional Development Certificate Program in E-Discovery, Information Governance, and Privacy (Sept. 20, 2021).
- 193. "Analysis of Data," Osgoode Professional Development Certificate Program in E-Discovery, Information Governance, and Privacy (Sept. 24, 2021).
- 194. "Judicial Panel," with Hon. Bernice Bouie Donald, Hon. Ronald J. Hedges, Hon. Frank Maas, Hon. Kristen L. Mix, Hon. Andrew J. Peck, and Hon. Xavier Rodriguez, Zapproved Preservation Excellence ("PREX") 2021 Conference on Driving Innovation (Sept. 28, 2021).
- 195. "Understanding AI and Machine Learning: Dos and Don'ts for the Innovative Legal Department," with Aaron Bath, David R. Cohen, and Jonathan Redgrave, Zapproved Preservation Excellence ("PREX") 2021 Conference on Driving Innovation (Sept. 28, 2021).

- 196. "Working with Special Masters," Continuing Legal Education ("CLE") Program for the United States Department of Justice ("DOJ") Civil Division (Sept. 30, 2021).
- 197. "Fundamentals of Technology-Assisted Review ('TAR') for eDiscovery," Guest Lecture at Hon. Xavier Rodriguez's Electronic Discovery Course at St. Mary's University School of Law (Sept. 30, 2021).
- 198. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Memphis / Mid-South Federal Bar Association ("FBA") Annual Seminar (Oct. 22, 2021).
- 199. "A Brief Introduction to Artificial Intelligence," Ontario Bar Association ("OBA") Digital Evidence and E-Discovery ("DEED") Working Group (Oct. 27, 2021).
- 200. "The Path of Least Resistance: From Raw Data to Admitted Exhibit," with Hon. Paul W. Grimm, Continuing Legal Education ("CLE") Program for the United States Department of Justice ("DOJ") Civil Division (Oct. 28, 2021).
- 201. "A Chat with Tom O'Connor and Rachi Messing," eDiscovery Channel on YouTube (Nov. 8, 2021).
- 202. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Central and Eastern European Law Initiative ("CEELI") Institute / National Judicial Academy ("NJA") of India / United States Federal Judicial Center ("FJC") Joint Judicial Education Programs on Cybercrimes and Human Trafficking in the Courts, for the Judges of India (Nov. 8, 2021).
- 203. "Managing Complexity in Discovery in Mergers and Acquisitions," with Andrew Boyer, Carolyn Anger and Alysha Knight-Manji, Canadian Legal Innovation Forum ("CANLIF") Fall 2021 Webinar Series (Nov. 9, 2021).
- 204. "Artificial Intelligence and Litigation," with Daniel W. Linna, Jr., Harry Surden, and Rebecca Wexler, University of Colorado Boulder Law School Silicon Flatirons Conference on The State of the Art of Artificial Intelligence in the Practice of Law (Nov. 9, 2021).
- 205. "Artificial Intelligence as Evidence," with Hon. Paul W. Grimm, Federal eDiscovery Working Group ("FEDWG") Annual Virtual Conference (Nov. 10, 2021).
- 206. "Artificial Intelligence as Evidence," with Seth Katsuya Endo, Hon. Paul W. Grimm, William ("Bill") F. Hamilton, and Rebecca Wexler, University of Florida Levin College of Law (Nov. 17, 2021).
- 207. "Achieving Trustworthy AI: Inherent Challenges," Roundtable on Execution: Artificial Intelligence and Challenges, Vector Institute for Artificial Intelligence Trustworthy AI Project (Nov. 18, 2021).
- 208. "Artificial Intelligence and Bias," with Hon. Katherine Forrest, and James B. Kobak, Jr., New York County Lawyers Association ("NYCLA") Bridge the Gap Continuing Legal Education ("CLE") Institute Program (Nov. 19, 2021).
- 209. "Search and Review Strategies for Document Collections of All Sizes," with Ryder Gililand, Gordon Lee, and Debbie McGlynn, 2021 Digital Evidence and eDiscovery Institute, Co-Sponsored by the Ontario Bar Association ("OBA"), The Law Society of Ontario, and The Advocates' Society (Nov. 22, 2021).
- 210. "Negotiating ESI Protocols," Continuing Legal Education ("CLE") Program for the United States Department of Justice ("DOJ") Civil Division (Nov. 30, 2021).

- 211. "Artificial Intelligence as Evidence," with Gordon V. Cormack and Hon. Paul W. Grimm, Electronic Discovery Reference Model ("EDRM") Continuing Legal Education ("CLE") Program in Connection with eDiscovery Day 2021 (Dec. 1, 2021).
- 212. "Fundamentals of Artificial Intelligence and Issues of Bias: What Every Law Student Should Know," Guest Lecture at Brian Donnelly's and Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Dec. 2, 2021).
- 213. "Judges' Panel," with Hon. Willie J. Epps, Jr., Hon. Iain Johnston, Hon. Tanya R. Kennedy, and Hon. Xavier Rodriguez, 2021 Deloitte Federal Discovery's 2021 Electronic Discovery Symposium for Government Agencies (Dec. 7, 2021).
- 214. "A Brief Overview of Special Masters," with David M. Tenner, Colorado Bar Association Continuing Legal Education ("CBA-CLE") Discovery Practicum on Better Discovery: Taking a More Targeted Approach (Dec. 8, 2021).
- 215. "International eDiscovery Part I," with Daniel B. Garrie, Rachi Messing, and Daniel J. Nichols, Thompson Reuters (WestlawLegalEd), Global Cybersecurity Institute, and Lexeprint Inc. Continuing Legal Education ("CLE") Webinar (Dec. 20, 2021).
- 216. "International eDiscovery Part II," with Daniel B. Garrie, Rachi Messing, and Daniel J. Nichols, Thompson Reuters (WestlawLegalEd), Global Cybersecurity Institute, and Lexeprint Inc. Continuing Legal Education ("CLE") Webinar (Dec. 20, 2021).

- 217. "The Mathematics of eDiscovery," with Matthew Mahon and Michael Quartararo, Association of Certified eDiscovery Specialists ("ACEDS") Webinar (Jan. 28, 2020).
- 218. "Emerging Technologies in Litigation," with Hon. Melissa Crane, Hon. Katherine Forrest, Gail Gottehrer, and Kan Nawaday, Commercial and Federal Litigation Section Meeting at the New York State Bar Association ("NYSBA") Annual Meeting (New York, NY Jan. 29, 2020).
- 219. "An Introduction to Technology-Assisted Review for eDiscovery," Guest Lecture at Tessa Jacobs' and Robin Stewart's Electronic Discovery Course at the University of Missouri–Kansas City Law School (Feb 18, 2019).
- 220. "Artificial Intelligence ('AI') to Support the Practice of law," with Hon. David Gerston, Phillip A. Gold, Hon. Hon. Ronald J. Hedges, and Jason Kairilla, Artificial Intelligence in Courtroom Practice: What Lawyers and Judges Need to Know, The National Judicial College, American Board of Trial Advocates ("ABOTA") Miami Chapter, Dade County Bar Association, and Miami Dade Trial Lawyers Association (Miami, FL Feb. 27, 2020).
- 221. "Judges and Artificial Intelligence ('AI'), with Hon. Jennifer Bailey, Hon. David Gerston, Hon. Ronald J. Hedges, Hon. Miguel de la O, Richard DeNapoli, and Hon. Daryl Trawick Artificial Intelligence in Courtroom Practice: What Lawyers and Judges Need to Know, The National Judicial College, American Board of Trial Advocates ("ABOTA") Miami Chapter, Dade County Bar Association, and Miami Dade Trial Lawyers Association (Miami, FL Feb. 27, 2020).

- 222. "Bias in Data-Driven Decision-Making," Privacy, Infrastructures, Policy ("PIP") Conference, University of Waterloo (Waterloo, ON Feb. 28, 2020).
- 223. "Lessons in Leadership: Innovating When Innovation Isn't Welcome," Keynote at the Women in Data Science Conference 2020 ("WiDS@Ottawa") (Ottawa, ON Mar. 2, 2019).
- 224. "Ethics, Artificial Intelligence, and Society," with Fawn Annan, Karen Eltis, Sarah Tatsis, and Carolyn Watters," Panel at the Women in Data Science Conference 2020 ("WiDS@Ottawa") (Ottawa, ON Mar. 2, 2019).
- 225. "eDiscovery Special Masters: The Good, the Bad, and the Ugly," with Jeannine Kenney and Hon. Kristen L. Mix, Ninth Annual Arizona State University ("ASU") –Arkfeld eDiscovery and Digital Evidence Conference (Phoenix, AZ Mar. 11, 2019).
- 226. "ESI Search Strategies: Determining What's Right for Your Case," with Tessa Jacob and Anne Kershaw, Ninth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference (Phoenix, AZ Mar. 12, 2019).
- 227. "Hot Topics in Electronic Discovery: Fundamentals of Technology-Assisted Review," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice Course, Maurice A. Deane School of Law at Hofstra University (Mar. 19, 2020).
- 228. "Fundamentals of Technology-Assisted Review," Guest Lecture at Craig Ball's Electronic Discovery and Digital Evidence Course at the University of Texas at Austin School of Law (Apr. 6, 2020).
- 229. "Artificial Intelligence and the Law: Real Benefits and Challenges," Guest Lecture at Brian Donnelly's and Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Apr. 16, 2020).
- 230. "Remote Teaching and Assessment," with Carmen Bruni, Craig Kaplan, Ian McKillop, Naomi Nishimura, and Dave Tompkins, David R. Cheriton School of Computer Science, University of Waterloo (Apr. 29, 2020).
- 231. "Rebooting: Security and Data Privacy Considerations," with Deborah Evans, Plinio Morita, Michele Mosca, Michael Parker, and Douglas Stebila, The Gateway for Enterprises to Discover Innovation ("GEDI") at the University of Waterloo Post-COVID-19 Reboot Panel Series (June 2, 2020).
- 232. "Hot Topics in Electronic Discovery: Fundamentals of Technology-Assisted Review," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice Course, Maurice A. Deane School of Law at Hofstra University (June 9, 2020).
- 233. "The ACEDS Summer Roundtable Series: Transitions, Transformations, and Triumphs in 2020," with Ari Kaplan, Patricia LeBel-Lasse, Joy Murao, Michael Quartararo, and George Socha Association of eDiscovery Specialists ("ACEDS") Webinar (July 15, 2020).
- 234. "The Battle Against COVID-19: How eDiscovery Software is Playing a Role," with Sharon D. Nelson and John W. Simek, 117th Episode of Digital Detectives Podcast on Legal Talk Network (July 15, 2020).
- 235. "Diversity and Inclusion in Legal Tech Education," Virtual SubTech 2020 BIG IDEA Talk (July 16, 2020).

- 236. "TAR Unstuck: Everything You Ever Wanted to Know About Technology-Assisted Review," Georgetown Law Executive and Continuing Legal Education ("CLE") Law and Technology Forum (July 22, 2020).
- 237. "Fundamentals of Artificial Intelligence and Issues of Bias," Georgetown Law Executive and Continuing Legal Education ("CLE") Law and Technology Forum (July 22, 2020).
- 238. "New Technologies: How Attorneys and Their Clients Might Evaluate New Technologies to Decide Whether to Adopt," with Sarah Gold and Hon. Ronald J. Hedges, New York State Bar Association ("NYSBA") Summer Webinar Series (July 23, 2020).
- 239. "Fundamentals of Artificial Intelligence and Issues of Bias," Association of eDiscovery Specialists ("ACEDS") Detroit Chapter Webinar (Aug. 4, 2020).
- 240. "Welcome to the Machine: AI in the Archives," with Sharmila Bhatia, Roger Christman, Gordon V. Cormack Cal Lee, and Brent M. West, 2020 Joint Meeting of the Council of State Archivists ("CpSA") /Society of American Archivists ("SAA") Annual Meeting (Aug. 7, 2020).
- 241. "Fundamentals of Artificial Intelligence and Issues of Bias," Continuing Legal Education ("CLE") Program for the U.S. Department of Justice ("DOJ") Civil Division (Aug. 19, 2020).
- 242. "Ethics of Artificial Intelligence in Medical Research," with Ran Goldman, The Ethical Research Podcast (Aug. 21, 2020).
- 243. "Special Masters in Litigation," with Hon. Frank Maas, Hon. Kristen L. Mix, and Hon. Ira Warshawsky, Zapproved Preservation Excellence ("PREX") Summit Series (Aug. 25, 2020).
- 244. "Artificial Intelligence and Algorithms," Guest Lecture at Mark Berman's Technology and the Legal Profession at Albany Law School (Sept. 1, 2020).
- 245. "Fundamentals of Artificial Intelligence and Issues of Bias, New York State Bar Association ("NYSBA") Committee on Technology and the Legal Profession Continuing Legal Education ("CLE") Program (Sept. 10, 2020).
- 246. "TAR Talk Episode 15: Legal TAR Algorithm Helps Canadian Health Authorities Track Coronavirus Research," with Thomas C. Gricks, III, Jeremy Pickens, and John Tredennick. Electronic Discovery Reference Model ("EDRM") Global Podcast Network (Sept. 18, 2020).
- 247. "Good Housekeeping Seal of Approval for AI: Evaluating Artificial Intelligence and Other Technology for Law," with Daniel W. Linna Jr., Law Technology Now Podcast (Sept. 23, 2020).
- 248. "Illumination Zone," with Gordon V. Cormack, Mary Mack, and Kaylee Frangos Walstad, Electronic Discovery Reference Model ("EDRM") Global Podcast Network (Sept. 25, 2020).
- 249. "Fundamentals of Technology-Assisted Review," Guest Lecture at Hon. Xavier Rodriguez's Electronic Discovery Course at St. Mary's University School of Law (Sept. 29, 2020).
- 250. "Checklist for Choosing an eDiscovery Solution," with Carolyn E. Anger, James A. Gill, and Michael Quartararo, Ipro Tech and Association of Certified eDiscovery Specialists ("ACEDS") Voices of eDiscovery Webinar (Sept. 30, 2020).

- 251. "Underappreciated Lawyering Skills," with Hon. Michael E. Hegarty, Hon. Kristen L. Mix, and Gina Rodriguez, Faculty of Federal Advocates ("FFA") Continuing Legal Education ("CLE") Program (Sept. 30, 2020).
- 252. "Evaluating Legal Services and legal Technology for Effectiveness, Quality, and Value," Guest Lecture at Daniel W. Linna Jr.'s AI and Legal Reasoning Course at Northwestern Pritzker School of Law (Oct. 13, 2020).
- 253. "Trustworthy AI: Security, Privacy, and Ethics," with N. Asokan, Ro Cammorata, Vijay Ganesh, Xi He, and Yaoliang Yu, University of Waterloo Cybersecurity and Privacy Institute ("CPI") Cybersecurity Month Event (Oct. 15, 2020).
- 254. "The Path From Here to There," Presentation to the J.W. Graham Trust Advisory Committee Meeting (Oct. 20, 2020).
- 255. "eDiscovery and Technology-Assisted Review in the Civil Context," Guest Lecture at Mark Berman's Technology and the Legal Profession Course at Albany Law School (Oct. 20, 2020).
- 256. "Fundamentals of Artificial Intelligence and Issues of Bias: What Every Law Students Should Know," Future of Law Lab at the University of Toronto Faculty of Law (Oct. 28, 2020).
- 257. "Basics of Electronically Stored Information ("ESI"): Part I," Training Program for the U.S. Civilian Board of Contract Appeals on Behalf of the National Judicial College ("NJC") (Nov. 2, 2020).
- 258. "Basics of Electronically Stored Information ("ESI"): Part II," Training Program for the U.S. Civilian Board of Contract Appeals Behalf of the National Judicial College ("NJC") (Nov. 2, 2020).
- 259. "Judicial Discovery Issues: Part I," with Hon. Daniel J. Crothers, Training Program for the U.S. Civilian Board of Contract Appeals Behalf of the National Judicial College ("NJC") (Nov. 2, 2020).
- 260. "Judicial Discovery Issues: Part II," with Hon. Daniel J. Crothers, Training Program for the U.S. Civilian Board of Contract Appeals Behalf of the National Judicial College ("NJC") (Nov. 2, 2020).
- 261. "Workshop 1: Statistics and Evaluating Technology-Assisted Review ("TAR") Outcomes," Continuing Legal Education ("CLE") Program for the U.S. Department of Justice ("DOJ") Civil Division (Nov. 4, 2020).
- 262. "Workshop 2: Negotiating Technology-Assisted Review ("TAR") Protocols and Validation Steps," Continuing Legal Education ("CLE") Program for the U.S. Department of Justice ("DOJ") Civil Division (Nov. 4, 2020).
- 263. "Search of Electronically Stored Information ("ESI")," Training Program for the U.S. Civilian Board of Contract Appeals on Behalf of the National Judicial College ("NJC") (Nov. 9, 2020).
- 264. "Social Media Issues," with Mark Lanterman, Training Program for the U.S. Civil Board of Contract Appeals on Behalf of the National Judicial College ("NJC") (Nov. 9, 2020).
- 265. "Proportionality and Cost-Shifting," with Mark Lanterman, Training Program for the U.S. Civilian Board of Contract Appeals on Behalf of the National Judicial College ("NJC") (Nov. 9, 2020).

- 266. "Spoliation and Sanctions," with Mark Lanterman, Training Program for the U.S. Civilian Board of Contract Appeals on Behalf of the National Judicial College ("NJC") (Nov. 9, 2020).
- 267. "The Path From Here to There," Keynote Address at the University of Waterloo Data Science Club's Lightening Talks: Exploring Research in Data Science Program (Nov. 9, 2020).
- 268. "Off the Beaten Path: Data Analytics for COVID-19 and Beyond," with Jason R. Baron, Ricardo Baeza-Yates and Robert Gebeloff, Georgetown Law 2020 Global Advanced eDiscovery Institute (Nov. 12, 2020).
- 269. "eDiscovery: Drivers, Trends, and Technology, with Carolyn E. Anger, Andrew Boywer, and Jessica Lockett, Canadian Legal Innovation Forum Webinar Series Fall/Winter 2020/2021 (Nov. 12, 2020).
- 270. "Artificial Intelligence in Civil and Criminal Discovery: Lessons From Science, Legal Norms, and Real-World Practice," with Hon. Paul W. Grimm, Bruce Hedin, and Yannick Meneceur, The Athens Roundtable on Artificial Intelligence and the Rule of Law (Nov. 16, 2020).
- 271. "Pajamas and Professionalism: Standards and Ethics for New Surroundings, New Tech, and New Social Media Uses," with Scott L. Malouf and Sari Montgomery, New York State Bar Association ("NYSBA") 2020 Virtual Tech Summit on Virtual Lawyering: A Practical Guide (Nov. 18, 2020).
- 272. "Fundamentals of Artificial Intelligence and Issues of Bias," Guest Lecture at Brian Donnelly's and Conrad A. Johnson's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Nov. 19, 2020).
- 273. "The ACEDS Fall Roundtable Series: Transitions, Transformations, and Triumphs in 2020," with Julie K. Brown, David Horrigan, Ari Kaplan, and Michael Quartararo, Association of eDiscovery Specialists ("ACEDS") Webinar (Nov. 23, 2020).
- 274. "Technology Accelerators," with Matt Maslow and Chuck Rothman, 2020 Digital Evidence and eDiscovery Institute, Co-Sponsored by the Ontario Bar Association ("OBA") Digital Evidence and eDiscovery Working Group and Sedona Canada (Nov. 25, 2020).
- 275. "Guest Interview," Daniel W. Linna, Jr.'s Digital Transformation of Legal Services: From Continuous Improvement to Disruption Course at Northwestern Pritzker School of Law (Dec. 17, 2020).

- 276. "The Great Debate," with Jake Heller, Thomas J. Hamilton, Lee J. Tiedrich, and Richard Tromans, ALM Media LLC Legalweek Workshop A AI Bootcamp 2.0 (New York, NY Jan. 28, 2019).
- 277. "The Use of Special Masters and E-Discovery Mediators in Connection with Court Litigation," with Mark Berman, Jeremy Feinberg, Hon. Shirley Werner Kornreich, and Hon. Frank Maas, Joint New York State Bar Association ("NYSBA") /JAMS Continuing Legal Education ("CLE") Program on Resolving E-Discovery Disputes Efficiently in Arbitration and in Court (New York, NY Jan. 28, 2019).
- 278. "Access to Justice: Substantial Challenges and How You, the Law, and Technology Can Help," with David Horrigan, Zabrina Jenkins, Hon. Tanya R. Kennedy, Hon. Xavier Rodriguez, and James Sandman, Data Discovery 2019: Challenges for Business and Society—With Answers from Law and Technology Track at Legaltech 2019 (New York, NY Jan. 30, 2019).

- 279. "AI Fundamentals: Impact on the Legal Profession," Guest Lecture at Mark A. Berman and Joe Rosenberg's Course on Technology and the Law: No Expertise Required, City University of New York ("CUNY") School of Law (Long Island City, NY Jan. 30, 2019).
- 280. "Artificial Intelligence and Law: Genuine Benefits and Challenges," Guest Lecture at Karen Eltis' University of Ottawa Faculty of Law Internet/Cyber Law Course (Ottawa, ON Feb. 7, 2018).
- 281. "Artificial Intelligence and Law: Real Benefits and Challenges: Session I," Annual Toronto Youth STEM and Innovation ("TYSI") Conference (Toronto Feb. 19, 2019).
- 282. "Artificial Intelligence and Law: Real Benefits and Challenges: Session II," Annual Toronto Youth STEM and Innovation ("TYSI") Conference (Toronto Feb. 19, 2019).
- 283. "AI Update: What Works, What Doesn't, Questions to Ask, and Thorny Legal Issues," with William ("Bill") Kellerman and Gary Merchant, Eighth Annual Arizona State University ("ASU") –Arkfeld eDiscovery Conference (Phoenix, AZ Mar. 6 8, 2019).
- 284. "Artificial Intelligence in Law: Real Benefits and Challenges," Keynote Address at Eighth Annual Arizona State University ("ASU") Arkfeld eDiscovery Conference (Phoenix, AZ Mar. 6 8, 2019).
- 285. "TAR Unstuck: Choosing the Right Tool, Using It Wisely, and Negotiating an Effective TAR Protocol," with Tessa Jacobs and Jeannine M. Kenney, Eighth Annual Arizona State University ("ASU") Arkfeld eDiscovery Conference (Phoenix, AZ Mar. 6 8, 2019).
- 286. "An Introduction to Technology-Assisted Review for eDiscovery," Guest Lecture at Tessa Jacobs' Electronic Discovery Course at the University of Missouri–Kansas City Law School (Mar. 12, 2019).
- 287. "Promoting and Increasing Adoption of TAR in Your Organization," with Michallynn Demiter and Jeff Gilles, International Legal Technology Association ("ILTA") Webinar (Mar. 21, 2019).
- 288. "Understanding Automated Decision-Making for Lawyers: Code and Data," Opening Presentation at The Citizen Lab, Law Commission of Ontario, and International Human Rights Forum on Automated Decision-Making in the Criminal Justice System (Toronto, ON Mar. 22, 2019).
- 289. "Hot Topics in Electronic Discovery," Guest Lecture at John Tsiforas' Computer Technology in Legal Practice at the Maurice A. Deane School of Law at Hofstra University (Mar. 25, 2019).
- 290. "eDiscovery and Technology-Assisted Review," with Hon. James C. Francis, IV, Guest Lecture at Mark A. Berman and Joe Rosenberg's Course on Technology and the Law: No Expertise Required, City University School of Law (Long Island City, NY Mar. 27, 2019).
- 291. "Fundamentals of Technology-Assisted Review," Guest Lecture at Craig Ball's Electronic Discovery and Digital Evidence Course at the University of Texas at Austin School of Law (Apr. 1, 2019).
- 292. "Lessons in Leadership: Leading the Way on Rocky Terrain," Plenary Session at the New York Information Technology ("IT") Leadership Academy (Albany, NY Apr. 4, 2019).
- 293. "Artificial Intelligence and the Law: Real Benefits and Challenges," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Apr. 11, 2019).

- 294. "The Legal and Ethical Implications of Artificial Intelligence," Plenary Session at the Federal Judicial Center ("FJC") Magistrate Judges' National Workshop No. 1 (Miami, FL Apr. 16, 2019).
- 295. "Helping the Medicine Go Down: Teaching Across C.P. Snow's Two Cultures, with Scott Campbell, Doreen Fraser, and Paul Heidbrecht, University of Waterloo Teaching and Learning Conference (Waterloo, ON May 2, 2019).
- 296. "A Candid Conversation with U.S. Magistrate Judge Kristen L. Mix," at Deloitte Federal Discovery's 2019 Electronic Discovery Symposium for Government Agencies (Washington, DC May 7, 2019).
- 297. "Machine Learning in Operations: Lessons Learned From the TAR Journey," with Ian Wilson, Corporate Legal Operations Consortium ("CLOC") 2019 Vegas Fourth Annual Institute (Las Vegas, NV May 14 16, 2019).
- 298. "Fundamentals of Technology-Assisted Review ('TAR')," Legal Technology Education Society of Alberta ("LESA") 2019 Legal Technology Conference (Edmonton, Alberta May 24, 2019).
- 299. "Proportionality in eDiscovery From Mobile Devices to TAR: Exploring Proportionality From Both Legal and Technological, with Woods Abbott, Jonathan Sablone, and George Socha, Second Annual New England Legal Technology Professionals ("NETLP") Connect Conference (Boston, MA May 30, 2019).
- 300. "Academy Overview," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 2, 2019).
- 301. "History of eDiscovery and the New Rules," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 2, 2019).
- 302. "Coaches Corner: Meet and Confer Strategies," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 3, 2019).
- 303. "Law of Collections and Forms of Production I," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 4, 2019).
- 304. "Law of Collections and Forms of Production II," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 4, 2019).
- 305. "Fundamentals of Technology-Assisted Review ('TAR') for eDiscovery," Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 5, 2019).
- 306. "TAR Exercises," with Gordon V. Cormack, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 5, 2019).
- 307. "The Courts and TAR: Where Are They and Where They Are Going," with Craig Ball, Hon. John M. Facciola, and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 5, 2019).
- 308. "Mock 30(b)(6) IT Witness Depositions and Discussion," with Gordon V. Cormack, Hon. John M. Facciola, Tom O'Connor, and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training

- Academy 2019 (Washington, DC June 6, 2019).
- 309. "Federal Rule of Evidence 502," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 6, 2019).
- 310. "Privacy and eDiscovery Process From a National and International Perspective," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 6, 2019).
- 311. "Ethics," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 6, 2019).
- 312. "Mock 26(f) Conference," with Hon. Paul W. Grimm, Georgetown University Law Center eDiscovery Training Academy 2019 (Washington, DC June 7, 2019).
- 313. "Celebrating Women in Computer Science: An Interview with Turing Award Laureates Shafi Goldwasser and Barbara Liskov," University of Waterloo Turing Symposium and Celebration of Women in Computer Science (Waterloo, ON June 13, 2019).
- 314. "Wo(man) and Machine Who Makes the Decisions and Why," with Rozita Dara, Sheldon Fernandez, Lynda Partner, Neil Randall, and Sarah Shortreed, Waterloo Regional Chapter of Women in Communications and Technology ("WCT") (June 25,2019). [5:30 8:30 PM; Accelerator Centre on Hagey Boulevard, West Entrance, 1st Floor]
- 315. "Fundamentals of Artificial Intelligence Algorithms and Oppression," Guest Lecture at Mark A. Berman's and Deborah S. Kerr's Course on Emerging Technology and the Practice of Law, Syracuse Law School (Sept. 12, 2019).
- 316. "Leadership: The Role of Special Masters in eDiscovery," with Craig Ball, Jonathan Redgrave, and Hon. Shira A. Scheindlin, Zapproved's Preservation Excellence ("PREX") 2019 Conference (Chicago, IL Sept. 17 19, 2019).
- 317. "Leadership: Judicial Forum Lightening Round with the Judges," with Hon. Ronal J. Hedges, Hon. Elizabeth Laporte, Hon. Frank Maas, Hon. Andrew J. Peck, and Hon. Xavier Rodriguez, Zapproved's Preservation Excellence ("PREX") 2019 Conference (Chicago, IL Sept. 17 19, 2019).
- 318. "Artificial Intelligence and the Law: Real Benefits and Challenges," Keynote Address at Fourth Annual Association of Certified eDiscovery Specialists ("ACEDS") Detroit Symposium Midwest eDiscovery Conference (Detroit, MI Sept. 27, 2019).
- 319. "Best Practices and Strategies for Technology-Assisted Review ("TAR")," U.S. Department of Justice ("DOJ") Civil Division (Washington, DC Oct. 16, 2019).
- 320. "eDiscovery and Technology-Assisted Review in Civil and Criminal Proceedings," with Emma M. Greenwood, Guest Lecture at Mark A. Berman's and Deborah S. Kerr's Course on Emerging Technology and the Practice of Law, Syracuse Law School (Oct. 17, 2019).
- 321. "Teaching Across Two Cultures: Bridging the Gap Between Computer Science and Law," Lightning Talk at University of Waterloo Summit on Responsible Innovation and Technology (Waterloo, ON Oct. 23, 2019).

- 322. "Artificial Intelligence and the Law: Real Benefits and Challenges," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Oct. 24, 2019).
- 323. "Plenary 1: Forward to the Future: Legal and Ethical Implications of Artificial Intelligence," Southern District of Texas Bench and Bar Conference (Houston, TX Oct. 29, 2019).
- 324. "Civil Breakout 1: Drilling Down ESI Issues That Impact Civil Practice," with Zenobia Harris Bivens, Southern District of Texas Bench and Bar Conference (Houston, TX Oct. 29, 2019).
- 325. "Lessons in Leadership: Leading the Way on Rocky Terrain," ACM Canadian Celebration of Women in Computing ("CAN-CWIC 2019") (Mississauga, ON Nov. 9, 2019).
- 326. "Introduction and Overview: What is Artificial Intelligence / Machine Learning / Automated Decision-Making, and Why Should We Care?," Law Society of Ontario 2019 Special Lectures Program (Toronto, ON Nov. 21, 2019).
- 327. "Lessons in Leadership: Leading the Way on Rocky Terrain," Keynote Address at Waterloo WatITis 2019 Conference (Waterloo, ON Dec. 4, 2019).

- 328. "An Introduction to Electronic Discovery," Topics in Electronic Discovery, Georgetown University Law Center Spring 2018 Week One Upper-Class JD and LLM Course (Washington, DC Jan. 8, 2018).
- 329. "The 2015 Federal Rules Amendments Two Years Later and Counting" and "An Introduction to Federal Rule of Evidence 502," Topics in Electronic Discovery, Georgetown University Law Center Spring 2018 Week One Upper-Class JD and LLM Course (Washington, DC Jan. 9, 2018).
- 330. "An Introduction to Search and Review in eDiscovery," Topics in Electronic Discovery, Georgetown University Law Center Spring 2018 Week One Upper-Class JD and LLM Course (Washington, DC Jan. 10, 2018).
- 331. "Trending Now: #Competence, #Cooperation, #Social Media, and . . . ," Topics in Electronic Discovery, Georgetown University Law Center Spring 2018 Week One Upper-Class JD and LLM Course (Washington, DC Jan. 11, 2018).
- 332. "2018 Update on Ethics in Litigation," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Amy Walker Wagner, American Law Institute Continuing Legal Education ("ALI-CLE") Webcast (Jan. 16, 2018).
- 333. "ESI for Dummies: What Every Legal Team Should Know The Lawyer's Guide to ESI and Forensics 101," with Nicholas P. Chrysanthem, Michael L. Fox, and Hon. Ronald J. Hedges, New York State Bar Association 2018 Annual Meeting, LPM Day Hot Topics in Law Practice Management (New York, NY Jan. 25, 2018).
- 334. "Presentation of the Honorable Shira Scheindlin Lifetime Achievement Award to the Honorable Craig B. Shaffer," Zapproved Corporate E-Discovery Hero Awards Ceremony (New York, NY Jan. 29, 2018).
- 335. "Fostering AI Innovation in Canada," with Marcus Brubaker, Mayor Jeff Lehman, Victor Garcia, Vinay Mehta, and Greg Wooton, Osgoode Intellectual Property Law and Technology Program Round Table

- Discussion on Bracing for Impact The Artificial Intelligence Challenge: A Roadmap for AI Governance in Canada, (Toronto, ON Feb. 1, 2018).
- 336. "AI for Social Good," with David Lepofsky, Brandie M. Nonnecke, Guy Sediman, Bob Tarantino, and Jutta Treviranus, Osgoode Intellectual Property Law and Technology Conference on Bracing for Impact The Artificial Intelligence Challenge: A Roadmap for AI Governance in Canada, (Toronto, ON Feb. 2, 2018).
- 337. "Data Disarmament: A Fireside Chat with Cathy O'Neil on the Ethical Challenges of AI," with Cathy O'Neil (Waterloo, ON Feb. 8, 2018).
- 338. "Fundamentals of Electronic Discovery and Technology-Assisted Review," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Feb. 15, 2018).
- 339. "An Introduction to Technology-Assisted Review for eDiscovery," Guest Lecture at Tessa Jacobs' Electronic Discovery Course at the University of Missouri–Kansas City Law School (Feb. 27, 2018).
- 340. "Applying What We Have Learned from 'eDiscovery 1.0' to New and Evolving Legal Challenges," with Jerone J. English, The 12th Annual Sedona Conference Institute ("TSCI") on Applying eDiscovery Skills and Technologies to All Areas of the Law (Nashville, TN Mar. 1, 2018).
- 341. "Using Data Analytics and Metrics to Achieve Proportionality," with Gareth Evans, Phil Favro, Hon. Leda Wettre, The 12th Annual Sedona Conference Institute ("TSCI") on Applying eDiscovery Skills and Technologies to All Areas of the Law (Nashville, TN Mar. 1, 2018).
- 342. "Artificial Intelligence, Ethics, and the Law," with Nicolas Economou, Mark Hedegus, and Jeremy Kemnitz, The 12th Annual Sedona Conference Institute ("TSCI") on Applying eDiscovery Skills and Technologies to All Areas of the Law (Nashville, TN Mar. 2, 2018).
- 343. "Algorithms, Machine Learning, and Artificial Intelligence The Myth and the Hype," with Michael Arkfeld and Thomas I. Barnett, Seventh Annual Arizona State University ("ASU") Arkfeld eDiscovery & Digital Evidence Conference on Gaining an Edge: Law, Technology, and Analytics (Phoenix, AZ Mar. 6, 2018).
- 344. "The Nuts and Bolts of Negotiating a Technology-Assisted Review (TAR) Protocol," with Robert Brownstone, Bruce Hedin, and Hon. Andrew J. Peck, Seventh Annual Arizona State University ("ASU") Arkfeld eDiscovery & Digital Evidence Conference on Gaining an Edge: Law, Technology, and Analytics (Phoenix, AZ Mar. 7, 2018).
- 345. "What Attorney Competence Means When It Comes to Handling Electronically Stored Information," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Hon. Lisa Margaret Smith, NYSBA Ethics in the Digital Age (New York, NY Mar. 13, 2018).
- 346. "The Do's and Don'ts of Attorney Social Media Use and Advice to Clients: AN Overview of the Rules of the Road," with Michael L. Fox, Ignatius A. Grande, and Scott L. Malouf, NYSBA Ethics in the Digital Age (New York, NY Mar. 13, 2018).
- 347. "An Introduction to Technology-Assisted Review for eDiscovery," Guest Lecture at Hon. James C. Francis IV Electronic Discovery Course at City University of New York (Long Island City, NY Mar. 15,

2018).

- 348. "An Introduction to Electronic Discovery," with Mark A. Berman, Guest Lecture at John Tsiforas' Computer Technology in Legal Practice at the Maurice A. Deane School of Law at Hofstra University (Hempstead, NY Mar. 19, 2018).
- 349. "What is Artificial Intelligence ("AI")? How Does It Work? What Are the Potential Implications of AI in General, and for Your Practice," With Allison Arden Besunder and Kathryn Hume, New York State Bar Association Technology and the Legal Profession Spring 2018 Artificial Intelligence Webinar Series (Mar. 21, 2018).
- 350. "Your Computer is Smarter and Faster Than You: Using Technology-Assisted Review in Your Litigation Practice to Increase Efficiency and Reduce eDiscovery Costs," University of Nebraska College of Law Continuing Legal Education ("CLE") Program (Omaha, NE Mar. 28, 2018).
- 351. "The Basics of eDiscovery, or How to Make Yourself Invaluable as an Associate from Day 1 By Learning Something No One Else at Your Firm Understands, Guest Lecture at University of Nebraska-Lincoln College of Law (Lincoln, NE Mar. 29, 2018).
- 352. "Artificial Intelligence, Real Benefits and Challenges," Consilio Women's Power Summit CLE and Red Door Spa Event (New York, NY Apr. 12, 2018).
- 353. "Nonconsensual Porn (Revenge Porn)" with Carrie Goldberg, Elisa D'Amico, Andrew Sta. Ana, and Ari Ezra Waldman, National Association of Women Judges Mid-Year Conference (Brooklyn, NY Apr. 13, 2018).
- 354. NYSBA AI Webinar in The Growing Use of Artificial Intelligence Applications in the Legal Profession and Their Potential Impact on Your Legal Practice, with Daniel Meyers and Scott Reents (Apr. 18, 2018).
- 355. "Resolving E-Discovery Disputes Efficiently in Arbitration and in Court," with Mark A. Berman, Hon. Jeremy Feinberg, and Hon. Frank Maas, Continuing Legal Education ("CLE") Program Co-Sponsored by JAMS and the Commercial and Federal Litigation Section of the New York State Bar Association (New York, NY Apr. 25, 2018).
- 356. "Where Waterloo Meets AI-Ethics," with Sheldon Fernandez, Leah Govia, and Kate Larson, University of Waterloo Alumni and Donors Event (Mississauga, ON Apr. 26, 2018).
- 357. "Artificial Intelligence, Real Benefits and Ethical Challenges," The Sedona Conference Track at the 17th Annual IPRO Innovations Conference 2018 (Scottsdale, AZ Apr. 30, 2018).
- 358. "Preparing for and Responding to Internal and Government Investigations," with Jerami D. Kemnitz, Glenn Melcher, David Shonka, The Sedona Conference Track at the 17th Annual IPRO Innovations Conference 2018 (Scottsdale, May 1, 2018).
- 359. "Technology-Assisted Review for eDiscovery," with William ("Bill") Hamilton and Hon. Gary R. Jones, Eleventh Circuit Biannual Judicial Conference (Ponte Vedra Beach, FL May 3-4, 2018).
- 360. "Artificial Intelligence: Genuine Benefits and Challenges," part of panel on Civil Claims in the Era of Automation and Artificial Intelligence, with Jeremy de Beer and Evan Thomas, National Judicial Institute Civil Law Seminar: Resistance is Futile The Technological Transformation of Substantive and

- Procedural Civil Law, Evidence, and the Administration of Civil Justice (St. John's, NL May 9, 2018).
- 361. "A Candid Conversation with U.S. District Judge Paul W. Grimm," with Hon. Paul W. Grimm, Deloitte Eleventh Annual Electronic Discovery Symposium for Government Agencies (Washington, DC May 10, 2018).
- 362. "Attorney Algorithm Aversion and Infatuation," Georgetown University Law Center / Exterro edTalk (May 16, 2018).
- 363. "Inside the Black Box: Search, Artificial Intelligence, and Ethics," with John Barkett and James Zucker, American Bar Association ("ABA") 12th Annual National Institute on eDiscovery Conference (Chicago, IL May 18, 2018).
- 364. "Academy Overview," with Craig D. Ball and Hon. John M. Facciola, Georgetown eDiscovery Training Academy (Washington, DC June 3, 2018).
- 365. "Practicum on eDiscovery Planning," with Craig D. Ball and Hon. John M. Facciola, Georgetown eDiscovery Training Academy (Washington, DC June 3, 2018).
- 366. "Law of Collections and Forms of Production Part I," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 5, 2018).
- 367. "Law of Collections and Forms of Production Part II," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 5, 2018).
- 368. "Fundamentals of Technology-Assisted Review," Georgetown eDiscovery Training Academy (Washington, DC June 6, 2018).
- 369. "TAR Exercises," with Gordon V. Cormack, Georgetown eDiscovery Training Academy (Washington, DC June 6, 2018).
- 370. "The Courts and TAR: Where Are They and Where They Are Going," with Craig D. Ball, Hon. John M. Facciola, and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 6, 2018).
- 371. "Mock 30(b)(6) IT Witness Deposition and Discussion," with Craig D. Ball, Gordon V. Cormack, Hon. John M. Facciola, and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 7, 2018).
- 372. "Federal Rule of Evidence 502," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 7, 2018).
- 373. "Privacy and Regulation of the eDiscovery Process: The Stored Communications Act, Carpenter and Its Implications, Sovereign Power, and the General Data Protection Regulation," with Hon. John M. Facciola, Georgetown eDiscovery Training Academy (Washington, DC June 7, 2018).
- 374. "Mock 26(f) Conference I," with Hon. John Anderson, Georgetown eDiscovery Training Academy (Washington, DC June 8, 2018).

- 375. "Mock 26(f) Conference II," with Hon. John Anderson, Georgetown eDiscovery Training Academy (Washington, DC June 8, 2018).
- 376. "Artificial Intelligence in Law," RSM Canada's Business Professional Services Law Firm Dinner (Toronto, ON June 13, 2018).
- 377. "Artificial Intelligence and the Legal Profession," with Mark Bowman and R. Douglas Vaughn, 2018 Annual Meeting of the International Association of Defense Counsel ("IADC") (Lisbon, Portugal July 9, 2018).
- 378. "eDiscovery for Every Litigator," Half-Day Continuing Legal Education ("CLE") Program for Kessler, Topaz, Meltzer & Check (Radnor, PA Aug. 23, 2018).
- 379. "The Quest for Total Recall," with Gordon V. Cormack, Keynote Address at the Eighteenth ACM Symposium on Document Engineering ("DocEng 2018") (Halifax, Nova Scotia Aug. 29, 2018).
- 380. "Update on Technology-Assisted Review: Advances and Challenges," with Gil Keteltas and Ashish S. Prasad, Hot Topics in Electronic Discovery 2018: What Corporate and Outside Counsel Need to Know, Practicing Law Institute ("PLI") Conference (New York, NY Sept. 17, 2018).
- 381. "Fundamentals of Technology-Assisted Review," Guest Lecture at Hon. Xavier Rodriguez's Electronic Discovery Course at St. Mary's University School of Law (San Antonio, TX Sept. 20, 2018).
- 382. "Artificial Intelligence in Legal Applications," with Kathryn Hume and Sondra Rebenchuk, Canadian Association of General Counsels (Las Vegas, NV Sept. 21, 2018).
- 383. "An Overview of AI and Other Emerging Legal Technologies," with Craig Boise, Chris Martin, Kathleen Turland, and David Zumpano, Syracuse University College of Law Symposium on Artificial Intelligence, Advanced Technologies, and the Practice of Law (Syracuse, NY Sept. 27, 2018).
- 384. "The Role and Implications of AI and Emerging Technologies in Law Practice," with Craig Boise, Christine Hasiotis, Chris Martin, Kathleen Turland, and David Zampano, Syracuse University College of Law Symposium on Artificial Intelligence, Advanced Technologies, and the Practice of Law (Syracuse, NY Sept. 27, 2018).
- 385. Keynote Address on Blueprint to the Future: Disruptive Technology, University of Waterloo Faculty of Science (14th Annual) 2018 Fusion Conference (Waterloo, ON Sept. 29, 2018).
- 386. "Fundamentals of Electronic Discovery and Technology-Assisted Review," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (Oct. 4, 2017).
- 387. "What is Societal Computing and Why Should You Care," with Robin Cohen and Srinivasan Keshav, Women in Computer Science ("WiCS") Event (Waterloo, ON Oct. 12, 2018).
- 388. "Fundamentals of eDiscovery and Electronically Stored Information ('ESI') Part I," National Judicial College General Jurisdiction/Special Courts: Advanced Programs (Reno, NV Oct. 18, 2018).
- 389. "Fundamentals of eDiscovery and Electronically Stored Information ('ESI') Part II," National Judicial College General Jurisdiction/Special Courts: Advanced Programs (Reno, NV Oct. 18, 2018).

- 390. "Ethics of Social Media," National Judicial College General Jurisdiction/Special Courts: Advanced Programs (Reno, NV Oct. 18, 2018).
- 391. "Ethical and Other Challenges with Artificial Intelligence ("AI"), National Judicial College General Jurisdiction/Special Courts: Advanced Programs (Reno, NV Oct. 18, 2018).
- 392. "Not Magic—Science: The Science Behind CAL and Other TAR," with Carolyn Anger and Jeff Gilles, International Legal Technology Association ("ILTA") Webinar (Oct. 23, 2018).
- 393. "Fundamentals of Technology-Assisted Review," Guest Lecture at Hon. James C. Francis IV's Electronic Discovery Course at City University of New York Law School (Long Island City, NY Oct. 24, 2018).
- 394. "The Role of Special/eDiscovery Masters," with Thomas C. Gricks, III, Hon. MaryBeth Kelly, Thomas Lidbury, and John Pappas, Third Annual Detroit Chapter and Inaugural Association of Certified eDiscovery Specialists ("ACEDS") Midwest Regional eDiscovery Conference (Detroit, MI Oct. 26, 2018).
- 395. "What Attorney Competence Means When It Comes to Handling Electronically Stored Information and New Technologies," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Hon. Lisa Margaret Smith, New York State Bar Association Ethics in the Digital Age Continuing Legal Education ("CLE") Program (New York, NY Nov. 1, 2018).
- 396. "An Overview of the Do's and Don'ts of Attorney Social Media Use and Advice to Clients," with Michael L. Fox, Ignatius A. Grande, and Scott L. Malouf, New York State Bar Association Ethics in the Digital Age Continuing Legal Education ("CLE") Program (New York, NY Nov. 1, 2018).
- 397. "How to Deal with New Technology," with Gail L. Gottehrer, Taa Grays, Hon. Ronald J. Hedges, and Hon. Matthew A. Sciarrino, Jr., New York State Bar Association Continuing Legal Education ("CLE") Program (New York, NY Nov. 2, 2018).
- 398. "Artificial Intelligence and Other Technologies in the Legal Space," with Benjamin Alarie, Xavier Beauchamp-Tremblay, and James Swanson, The Advocates' Society Ontario eDiscovery Institute 2018 (Toronto, ON Nov. 6, 2018).
- 399. "Responsible AI," with Courtney Doagoo, Ryan Robert Jenkins, and Donna Litt, Center for International Governance Innovation ("CIGI") and Communitech/Open Data Exchange ("ODX") Data Hub Sessions (Waterloo, ON Nov. 7, 2018).
- 400. "Artificial Intelligence, Genuine Benefits and Challenges: Is Your Computer a Better Lawyer Than You?," with Hon. Kristen L. Mix, Martin Tully, and Jeremiah Weasenforth, Georgetown University Law Center Advanced eDiscovery Institute 2018 (Washington, DC Nov. 15, 2018).
- 401. "AI in Medicine Academic Panel," with Philip Awadalla, Audrey Chung, Sunit Das, and Stephen MacKinnon, University of Waterloo 2018 Biotechnology and BioEngineering Conference ("BioTEC 2018") (Waterloo, ON Nov. 17, 2018).
- 402. "AI in Law: The Quest for Total Recall," Symposium at Technion Israel Institute of Technology (Haifa, Israel Nov. 21, 2018).

- 403. "Breakfast Roundtable Discussion on TAR," with Roddy Bourke, Gordon V. Cormack, and Chris Dale at McCann Fitzgerald (Dublin, Ireland Nov. 29, 2018).
- 404. "Artificial Intelligence, Real Benefits and Challenges: Is Your Computer Becoming a Better Lawyer Than You?," Keynote Address at La Touche Training eDiscovery and Information Governance Conference 2018 (Dublin, Ireland Nov. 30, 2018).
- 405. "Panel Discussion on Technology-Assisted Review," with Chris Dale, Karyn Harty, and Kelly Atherton, La Touche Training eDiscovery and Information Governance Conference 2018 (Dublin, Ireland Nov. 30, 2018).
- 406. "Fundamentals of TAR," Continuing Legal Education ("CLE") Program at Capital One (Henricho, VA Dec. 6, 2018).

- 407. "An Introduction to eDiscovery: What is 'ESI,' What Makes It So Different from Paper, and What Role Does It Play in the Litigation Process?," Georgetown University Law Center Spring 2017 First-Week Upper-Class JD and LLM Course on Topics in Electronic Discovery (Washington, DC Jan. 9, 2017).
- 408. "How Do the Federal Rules of Civil Procedure Related to eDiscovery Work, and What is Federal Rule of Evidence 502?," Georgetown University Law Center Spring 2017 First-Week Upper-Class JD and LLM Course on Topics in Electronic Discovery (Washington, DC Jan. 10, 2017).
- 409. "Fundamentals of Search and Review in eDiscovery and Developing a Sound and Defensible Search and Review Process," Georgetown University Law Center Spring 2017 First-Week Upper-Class JD and LLM Course on Topics in Electronic Discovery (Washington, DC Jan. 11, 2017).
- 410. "Selected Ethical and Other Issues in eDiscovery: Attorney Competence, Cooperation, Social Media, Bring Your Own Device, and The Internet of Things," Georgetown University Law Center Spring 2017 First-Week Upper-Class JD and LLM Course on Topics in Electronic Discovery (Washington, DC Jan. 12, 2017).
- 411. "Technology-Assisted Review: Fact or Fiction?," with Gordon V. Cormack, Spring 2017 E-Discovery Distinguished Speakers Series, University of Florida Levin College of Law International Center for Automated Information Retrieval (Gainesville, FL Feb. 20, 2017).
- 412. "More on Technology-Assisted Review," Guest Lecture at William (Bill) Hamilton's Electronic Discovery Course at the University of Florida Fredric G. Levin College of Law (Gainesville, FL Feb. 20, 2017).
- 413. "More on Technology-Assisted Review: Fact or Fiction?," Guest Lecture at William (Bill) Hamilton's Electronic Discovery Data Analysis and Review Course at the University of Florida Fredric G. Levin College of Law (Gainesville, FL Feb. 20, 2017).
- 414. "The Sedona Conference TAR Case Law Primer," with Lea Malani Bays, Gareth Evans, Joseph P. Guglielmo, Hon. Andrew J. Peck, Sandra Rampersaud, and Kenneth J. Withers, The Sedona Conference Working Group 1 Webinar (Feb. 22, 2017).
- 415. "Fundamentals of Electronic Discovery and Technology-Assisted Review," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA")

- Clinic Course at Columbia Law School (Feb. 23, 2017).
- 416. "Best Practices in Preservation and Collection," Continuing Legal Education ("CLE") Program at ConocoPhillips (Houston, TX Mar. 1, 2017)
- 417. "Implementing Advanced Technology to Achieve the 'Just, Speedy, and Inexpensive Determination of Every Action," with Gareth Evans, Tracy Greer, Robert Keeling, and Hon. Andrew J. Peck, 11th Annual Sedona Conference Institute ("TSCI") Program on eDiscovery: Discovery in a Dynamic Digital World (Houston, TX Mar. 2, 2017).
- 418. "Ethical Dangers in Social Media," with Denise E. Backhouse, Hon. Cathy Ann Bencivengo, and Kevin Brady, 11th Annual Sedona Conference Institute ("TSCI") Program on eDiscovery: Discovery in a Dynamic Digital World (Houston, TX Mar. 3, 2017).
- 419. "Search II: Starting Off on the Right Foot with Technology-Assisted Review," with Andrea D'Ambra, Alexander T. Goth, and Hal Marcus, Sixth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference on The New Normal: Law, Technology, and Innovation (Phoenix, AZ Mar. 8, 2017).
- 420. "The New Normal," with Brad Harris, Thomas Morrissey, and Hon. Xavier Rodriguez, Sixth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference on The New Normal: Law, Technology, and Innovation (Phoenix, AZ Mar. 9, 2017).
- 421. "Report from the Arizona State University ("ASU") Arkfeld Legal Analytics and Big Data Workshop," with Michael Arkfeld, Daniel M. Katz, and William Kellerman, Sixth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference on The New Normal: Law, Technology, and Innovation (Phoenix, AZ Mar. 10, 2017).
- 422. "Electronic Discovery The Current State of Play as to the Scope of Electronic Discovery in the Courts and in Arbitration: What the Rules Say and What is Actually Happening," with Sherman W. Kahn, Richard L. Mattiaccio, Hon. Shira A. Sheindlin, Steven Skulnik, and Hon. Ira B. Warshawsky, New York State Bar Association Joint Program on Cross Fertilization of Best Practices Recommendations by the Commercial and Federal Litigation and Dispute Resolution Sections for Improving Dispute Resolution in the Courts and in Arbitration, Fordham Law School (New York, NY Mar. 13, 2017).
- 423. "Fundamentals of Technology-Assisted Review," Continuing Legal Education ("CLE") Program at Holwell, Shuster & Goldberg LLP (New York, NY Mar. 15, 2017).
- 424. "Fundamentals of Technology-Assisted Review," Guest Lecture at Tessa Jacobs' Electronic Discovery Course at the University of Missouri–Kansas City Law School (Mar. 22, 2017).
- 425. "What Does Attorney Competence Mean When It Comes to Handling Electronic Discovery," with Hon. Victoria A. Graffeo, Hon. Ronald J. Hedges, and Shawndra G. Jones, Legal Ethics in the Digital Age 2017, New York State Bar Association Commercial and Federal Litigation Section Program (New York, NY Mar. 30, 2017).
- 426. "The Do's and Don'ts of Attorney Social Media Use and Advice to Clients: An Overview of the 'Rules of the Road'" with Michael L. Fox, Ignatius A. Grande, and Scott L. Malouf, Legal Ethics in the Digital Age 2017, New York State Bar Association Commercial and Federal Litigation Section Program (New York, NY Mar. 30, 2017).

- 427. "Ethics and Electronically Stored Information," with Hon. Ronald J. Hedges and Shawndra G. Jones, American Law Institute ("ALI") Continuing Legal Education ("CLE") Live Video Webcast Program (Philadelphia, PA Mar. 31, 2017).
- 428. "Fundamentals of Technology-Assisted Review," Guest Lecture at Joel Wuesthoff's Topics in eDiscovery, Cybersecurity, and Forensics Course at the University of Maine School of Law Center for Law & Innovation (Portland, Maine April 7, 2017).
- 429. "Fundamentals of Technology-Assisted Review and Continuous Active Learning (CAL)," Continuing Professional Development ("CPD") Program at Cassels Brock & Blackwell LLP (Toronto, ON Apr. 13, 2017).
- 430. "The Effect of Federal Rules Changes and New Technology, and Changes Needed to Resuscitate Class Actions," with Stephen Burbank, Elizabeth Cabraser, Hon. Robert Dow Jr., Brian Fitzpatrick, Richard Marcus, and Darren Robbins, at the Institute for Law and Economic Policy ("ILEP") and University of North Carolina Law Review 23rd Annual Symposium on Secrecy (Naples, FL Apr. 21, 2017).
- 431. "Understanding the Science and Mathematics Behind TAR," with Kenneth J. Withers, Keynote for The Sedona Conference® Legal Track at IPRO "Innovations" 2017 Conference (Scottsdale, AZ Apr. 25, 2017).
- 432. "eDiscovery Without Rules: Responding to Government and Internal Investigations," with Kevin Brady and David C. Shonka, The Sedona Conference® Legal Track at IPRO "Innovations" 2017 Conference (Scottsdale, AZ Apr. 25, 2017).
- 433. "Your Computer is Smarter and Faster Than You: Embracing Technology-Assisted Review and Artificial Intelligence in Your Litigation Practice," with Brendan Miller and Curtis Collette, ABA Section of Litigation Annual Conference (San Francisco, CA May 4, 2017).
- 434. "#Social Media: What You Don't Know Can Harm You," with Mark A. Berman and Hon. Ronald J. Hedges, New York State Supreme Court Appellate Divisions Joint In-House Continuing Legal Education ("CLE") Program (New York, NY May 9, 2017).
- 435. "A Candid Conversation with Former U.S. District Judge Shira A Scheindlin," Deloitte Tenth Annual Electronic Discovery Symposium for Government Agencies (Washington, DC May 11, 2017).
- 436. "Using Mediation to Effectively Resolve eDiscovery Disputes," with Mike Hamilton, Hon. Ronald J. Hedges, and Hon. Frank Maas, Exterro Webinar (May 12, 2017).
- 437. "2017 eDiscovery Update: Trends and Developments Under the Federal Rules and Beyond," with Hon. James C. Francis IV, Hon. Ronald J. Hedges, and Jeane A Thomas, American Law Institute ("ALI") Continuing Legal Education ("CLE") Webcast (May 31, 2017).
- 438. "Practicum on eDiscovery Planning," with Craig D. Ball, Hon. John M. Facciola, and Tom O'Connor, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 4, 2017).
- 439. "Realizing Your Goals for the Academy," with Craig D. Ball, Hon. John M. Facciola, and Tom O'Connor, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 4, 2017).

- 440. "An Introduction to eDiscovery: What is 'ESI,' What Makes It So Different From Paper, and What Role Does eDiscovery Play in the Litigation Process?," Topics in Electronic Discovery Course, Georgetown University Law Center Summer 2017 First-Week Upper-Class JD and LLM Course (Washington, DC June 5, 2017).
- 441. "The Law of Collections and Form of Production," with Mark S. Sidoti, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 6, 2017).
- 442. "How Do the Federal Rules of Civil Procedure Related to eDiscovery Work, and What is Federal Rule of Evidence 502?," Topics in Electronic Discovery Course, Georgetown University Law Center Summer 2017 First-Week Upper-Class JD and LLM Course (Washington, DC June 6, 2017).
- 443. "Technology-Assisted Review and Enhanced Search," The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 7, 2017).
- 444. "The Courts and Predictive Coding: Where They Are and Where They Are Going," with Craig D. Ball, Hon. John M. Facciola, Tom O'Connor, and Mark S. Sidoti, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 7, 2017).
- 445. "Fundamentals of Search and Review in eDiscovery and Developing a Sound and Defensible Search and Review Process," Topics in Electronic Discovery Course, Georgetown University Law Center Summer 2017 First-Week Upper-Class JD and LLM Course (Washington, DC June 7, 2017).
- 446. "Federal Rule of Evidence 502," with Hon. John M. Facciola and Mark S. Sidoti, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 8, 2017).
- 447. "Privacy and Regulation of eDiscovery Process," with Craig D. Ball, Hon. John M. Facciola, Tom O'Connor, and Mark S. Sidoti, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 8, 2017).
- 448. "Ethics," with Hon. John M. Facciola and Mark S. Sidoti, The Tenth Annual eDiscovery Training Academy, Georgetown University Law Center (Washington, DC June 8, 2017).
- 449. "Selected Ethical and Other Issues in eDiscovery: Attorney Competence, Cooperation, Social Media, Bring Your Own Device, and the Internet of Things Part I," Topics in Electronic Discovery," Georgetown University Law Center Summer 2017 First-Week Upper-Class JD and LLM Course (Washington, DC June 8, 2017).
- 450. "Selected Ethical and Other Issues in eDiscovery: Attorney Competence, Cooperation, Social Media, Bring Your Own Device, and the Internet of Things Part II," Topics in Electronic Discovery," Georgetown University Law Center Summer 2017 First-Week Upper-Class JD and LLM Course (Washington, DC June 9, 2017).
- 451. "Selective Digital Amnesia," with Gordon V. Cormack, DESI VII Workshop on Using Advanced Data Analysis in eDiscovery and Related Disciplines to Identify and Protect Sensitive Information in Large Collections at the 16th International Conference on Artificial Intelligence and the Law ("ICAIL") 2017 (London, UK June 12, 2017).
- 452. "Technology-Assisted Review: Fact or Fiction?," with Tess Blair, Gordon V. Cormack, and Chris Dale, Morgan Lewis & Bockius LLP Continuing Legal Education ("CLE") Program (London, UK June 13,

2017).

- 453. "Artificial Intelligence," with Julie Daughtry, Gordon V. Cormack, Francis McGovern, Steven Robinson, and Hon. Lee Rosenthal, 2017 Judges' Seminar, Duke Law Center for Judicial Studies (Durham, NC June 16, 2017).
- 454. "eDiscovery and Social Media Issues," with Mark Berman and Hon. Ronald J. Hedges, Continuing Legal Education ("CLE") Program for Court Attorneys and Principal Law Clerks of the New York State Appellate Division First Department (New York, NY June 27, 2017).
- 455. "Fundamentals of Electronic Search: From Keywords to Technology-Assisted Review," with Gordon V. Cormack and Jamie A. Chuck, Hawaii State Bar Association (Honolulu, HI July 18, 2017).
- 456. "Protecting the Confidentiality of Client Communications and Records Both in Practice and in Litigation," with Gordon V. Cormack and Jamie A. Chuck, Hawai'i County Bar Association in Conjunction with the Hawaii State Bar Association (Hilo, HI July 20, 2017).
- 457. "Enhancing Your Value as a Paralegal in an Increasingly Data-Driven World," with Gordon V. Cormack, Keynote Luncheon at Hawaii Paralegal Association Legal Expo (Honolulu, HI July 21, 2017).
- 458. "ESI Basics Part I," National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 15, 2017).
- 459. "ESI Basics Part II," National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 15, 2017).
- 460. "Search Today and Tomorrow Part I," National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 15, 2017).
- 461. "Search Today and Tomorrow Part II," National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 15, 2017).
- 462. "Moderated Questions, Answers, and Open Discussion," with Hon. Daniel J. Crothers and Mark Lanterman, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 15, 2017).
- 463. "Hands On Discovery Computer Lab on Search," with Hon. Daniel J. Crothers, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 16, 2017).
- 464. "ESI Legal Issues: From Privacy to Possession, Custody, or Control," with Hon. Daniel J. Crothers, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 16, 2017).
- 465. "Proportionality and Cost Shifting," with Hon. Daniel J. Crothers, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 17, 2017).
- 466. "Spoliation and Sanctions," with Hon. Daniel J. Crothers, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 17, 2017).

- 467. "Open Discussion and Conclusions," with Hon. Daniel J. Crothers and Mark Lanterman, National Judicial Collect Course on Judging in the Digital Age: Conquering Discovery and Admission of ESI (Reno, NV Aug. 17, 2017).
- 468. "Straight Talk About TAR," with Thomas C. Gricks III, Jeremy Pickens, and John Tredennick, Catalyst Webinar (Aug. 30, 2017).
- 469. "What is TAR?," with Evan Benjamin, Bruce Hedin, George Socha, and Hon. William R. Wilson, Duke Bench-Bar Conference on TAR Best Practices (Arlington, VA Sept. 7-8, 2017).
- 470. "Taming the Over-Preservation Beast," with Sarah Donovan, Jana Limer Mills, and Joe Morris, Zapproved 2017 Conference on Preservation Excellence ("PREX 2017") (Portland, OR Sept. 13, 2017).
- 471. "Judicial Panel: Return of Case Law by the Clock," with Hon. Ronald J. Hedges, Hon. Elizabeth Laporte, Hon. Frank Maas, Hon. Andrew J. Peck, and Hon. Xavier Rodriguez, Zapproved 2017 Conference on Preservation Excellence ("PREX 2017") (Portland, OR Sept. 14, 2017).
- 472. "Rule 34 of the Federal Rules of Civil Procedure: eDiscovery Requests and Responses," with Jeffrey Fowler and Ariana J. Tadler, Practicing Law Institute ("PLI") Electronic Discovery Institute 2017: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 18, 2017).
- 473. "Fundamentals of Technology-Assisted Review," Guest Lecturer at Hon. Xavier Rodriguez's Electronic Discovery Course at St. Mary's University School of Law (San Antonio, TX Sept. 21, 2017).
- 474. "Industry / Faculty Panel," with Alex Hudak, Sergey Gorbunov, Kate Larson, and Jeff Pound, 2017 David R. Cheriton School of Computer Science Undergraduate Research Opportunities Conference ("UROC 2017") (Waterloo, ON Sept. 22, 2017).
- 475. "Straight Talk on TAR: Addressing Head On the Myths and Misinformation That are Holding TAR Back," with Eric Schultenover, Ron Tienzo, and John Tredennick (Nashville, TN Oct. 3, 2017).
- 476. "Straight Talk on TAR: Addressing Head on the Myths and Misinformation That are Holding TAR Back," with Michael Murphy, Ron Tienzo, and John Tredennick (Atlanta, GA Oct. 4, 2017).
- 477. "Fundamentals of Technology-Assisted Review and Continuous Active Learning," with Gordon V. Cormack, at Stikeman Elliott LLP (Toronto, ON Oct. 11, 2017).
- 478. "The Future of E-Discovery Innovation in Canada," with Hon. Colin L. Campbell and James Swanson, Ontario eDiscovery Institute 2017 Co-Sponsored by The Advocates' Society, the Ontario Bar Association, and The Law Society of Upper Canada (Toronto, ON Oct. 16, 2017).
- 479. "How to Run a Successful Predictive Coding Project," Advocates' Society Ontario eDiscovery Institute 2017 Co-Sponsored by The Advocates' Society, the Ontario Bar Association, and The Law Society of Upper Canada (Toronto, ON Oct. 16, 2017).
- 480. "Attorney Algorithm Aversion," TED Talk at 2017 Fin (Legal) Tech Conference sponsored by The Law Lab at Illinois Tech Chicago Kent College of Law (Chicago, IL Oct. 19, 2017).
- 481. "What Attorney Competence Means When It Comes to Handling Electronically Stored Information," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Hon. Roslyn H. Richter, Legal Ethics in the Digital

- Age Fall 2017, New York State Bar Association Commercial and Federal Litigation Section Program (New York, NY Oct. 25, 2017).
- 482. "The Do's and Don'ts of Attorney Social Media Use and Advice to Clients: An Overview of the 'Rules of the Road,'" with Michael L. Fox, Daniel Lust, and Scott L. Malouf, Legal Ethics in the Digital Age Fall 2017, New York State Bar Association Commercial and Federal Litigation Section Program (New York, NY Oct. 25, 2017).
- 483. "Technology and Legal Education," with Joshua Covey, Gerald Lewis, Jr., and Gary Merchant, Second Annual Legal Analytics & Big Data Workshop, Center for Law, Science & Innovation at Arizona State University "ASU") Law School (Phoenix, AZ Oct. 27, 2017).
- 484. "TAR Trends Around the World," with Chris Dale, Constantine Pappas, and Hon. Andrew J. Peck, Technology in Practice ("TiP") 2017 National eDiscovery and Litigation Technology Conference (Toronto, ON Nov. 9, 2017).
- 485. "Where is TAR Headed in 2018 and Beyond?," with Hon. Kristin L. Mix, Jeffrey M. Sharer, James A. Sherer, and Ronni D. Solomon, Georgetown Advanced eDiscovery Institute (Washington, DC Nov. 16, 2017).
- 486. "Law, Ethics, and Policy in an Automated World," with Carol Eoannou, Keynote at Bloomberg Law's Emerging Technologies and Legal Ethics Program (New York, NY Nov. 30, 2017).
- 487. "A Lawyer's Ethical Duties with Emerging Technologies," with Roy D. Simon, Harris Z. Tilovitz, and James Q. Walker, Panel at Bloomberg Law's Emerging Technologies and Legal Ethics Program (New York, NY Nov. 30, 2017).
- 488. "Updating Your Toolkit: Experts Discuss," with Craig Ball, Mike Hamilton, Ralph C. Losey, and George Socha, Exterro Third Annual eDiscovery Day Webcast (Dec. 1, 2017).
- 489. "The Rules on their Second Anniversary Including a Case Study on Sanctions," with Kevin F. Brady, Hon. J. Michelle Childs, Hon. John M. Facciola, Hon. James C. Francis IV, Dawson Horn III, Hon. Andrew J. Peck, James A. Sherer, and Hon. Lisa Margaret Smith, Sandpiper Partners Fourth Annual Innovation in eDiscovery Conference (New York, NY Dec. 7, 2017).
- 490. "Technology, TAR, Machine Learning, and AI," with Kevin F. Brady, Hon. J. Michelle Childs, Hon. John M. Facciola, Hon. James C. Francis IV, Dawson Horn III, David J. Kessler, Mollie C. Nichols, Hon. Andrew J. Peck, James A. Sherer, and Hon. Lisa Margaret Smith, Sandpiper Partners Fourth Annual Innovation in eDiscovery Conference (New York, NY Dec. 7, 2017).

- 491. "Requesting and Producing ESI," with Hon. Ronald J. Hedges and Dean Emeritus Jim Rosenblatt, Guest Lecture at the Mississippi College School of Law Electronically Stored Information (E-Discovery) Course (Jackson, MS Jan. 12, 2016).
- 492. "Ethical Considerations," with Hon. Ronald J. Hedges and Dean Emeritus Jim Rosenblatt, Guest Lecture at the Mississippi College School of Law Electronically Stored Information (E-Discovery) Course (Jackson, MS Jan. 12, 2016).

- 493. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Feb. 11, 2016).
- 494. "Technology-Assisted Review for eDiscovery," Guest Lecture at William P. Butterfield and Allison Stanton's eDiscovery Class at American University Washington College of Law (Washington, DC Feb. 16, 2016).
- 495. "Fundamentals of Electronic Discovery," Guest Lecture at Karen Eltis' Internet/Cyber Law Course at the University of Ottawa Faculty of Law (Mar. 1, 2015).
- 496. "Day 1 Keynote Address: The New Rules in Action," with Lea Malani Bays, Kevin Brady, and Hon. Shira A. Scheindlin, 2016 Fifth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference (Tempe, AZ Mar. 9, 2016).
- 497. "TAR Wars: Debating the Sticking Points," with Lea Malani Bays, Hon. Craig B. Shaffer, John Tredennick, and Martin Tully, 2016 Fifth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference (Tempe, AZ Mar. 10, 2016).
- 498. "Getting Specific: Formulating and Responding to Rule 34 Requests in the New Age," with Lea Malani Bayes, Robert Owen, Hon. Craig Shaffer, Ariana J. Tadler, and Kelly Warner, The Tenth Annual Sedona Conference Institute on eDiscovery Staying Ahead of the eDiscovery Curve: Retooling Your Practice Under the New Federal Rules (Rancho Bernardo, CA Mar. 17, 2016).
- 499. "Using Technology to Achieve Proportionality," with James Bekier, Tor Gronborg, Taylor Hoffman, and Cecil Lynn, The Tenth Annual Sedona Conference Institute ("TSCI") Program on eDiscovery Staying Ahead of the eDiscovery Curve: Retooling Your Practice Under the New Federal Rules (Rancho Bernardo, CA Mar. 17, 2016).
- 500. "Ethics of Litigation," with Merri A. Baldwin, Hon. Ronald J. Hedges, and Hon. Frank Maas, American Law Institute Continuing Legal Education ("ALI CLE") Webinar (May 10, 2016).
- 501. "Leveraging the Use of Technology-Assisted Review," with Tracy Greer, Chris May, and Glen Melcher, Deloitte Electronic Discovery Symposium for Government Agencies (Washington, DC May 12, 2016).
- 502. "Leveraging Rule 53 The Value of the Special Master," with Hon. John M. Facciola, Hon. Richard A. Levie, Hon. Nan R. Nolan, Deloitte Ninth Annual Electronic Discovery Symposium for Government Agencies (Washington, DC May 12, 2016).
- 503. "Proportionate and Cost-Effective eDiscovery: An Oxymoron?," with Ignatius A. Grande, Hon. Barbara Kapnick, Hon. Andrew J. Peck, Sandra J. Rampersaud, and Anne S. Rutland, New York State Bar Association ("NYSBA") Commercial and Federal Litigation Section Spring Meeting (Cooperstown, NY May 13 15, 2016).
- 504. "A Discussion of the Stickiest Issues Involving TAR," with Henry J. Kelston, Hon. Nan R. Nolan, Hon. Andrew J. Peck, and Martin Tully, 2016 American Bar Association ("ABA") Tenth Annual National Institute on eDiscovery (Chicago, IL May 20, 2016).
- 505. "The Rise of the Machines," with John Barkett, Wendy Wen Yun Chang, and Edward J. Walters, American Bar Association ("ABA") 42nd National Conference on Professional Responsibility,"

- (Philadelphia, PA June 2, 2016).
- 506. "Practicum on eDiscovery Planning," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, Georgetown eDiscovery Training Academy (Washington, DC June 5, 2016).
- 507. "Law of Collections and Forms of Production," with Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 7, 2016).
- 508. "Technology-Assisted Review and Enhanced Search," Georgetown eDiscovery Training Academy (Washington, DC June 8, 2016).
- 509. "The Courts and Predictive Coding: Where Are They and Where They Are Going," with Craig Ball, Hon. John M. Facciola, Tom O'Connor, and Mark. S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 8, 2016).
- 510. "Federal Rule of Evidence 502," with Hon. John M. Facciola and Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 9, 2016).
- 511. "Privacy Regulation of eDiscovery Process," with Hon. John M. Facciola, Georgetown eDiscovery Training Academy (Washington, DC June 9, 2016).
- 512. "Mock Rule 26(f) and 16(b) Conferences," with Hon. Paul W. Grimm, Georgetown eDiscovery Training Academy (Washington, DC, June 10, 2016).
- 513. "Comparative Judicial Ethics in the Digital Age: Lawyers, Judges, and Social Media A U.S. Perspective" with Stephen Bindman, Karen Eltis, Hon. Frances Kiteley, and Hon. Hon. Yigal Mersel, International Legal Ethics Conference VII ("ILEC 2016") (New York, NY July 14, 2015).
- 514. "Proportionality in Discovery: Change to Rule 26(b)(1) Sea Change or Minor Tweak?," with Andrea D'Ambra and Brian Corbin, Today's General Counsel Institute: The Exchange eDiscovery (New York, NY July 18, 2016).
- 515. "Developments in Search," with Andrea D'Ambra, Krista Fuller, David Grant, Chuck Kellner, and Lee McCallister, Today's General Counsel Institute: The Exchange eDiscovery (New York, NY July 18, 2016).
- 516. "Litigation Technology: Meeting the Changing Landscape," with Thomas C. Gricks III, Scott Reents, and Thomas Seymour, at Bloomberg Big Law Business Conference on Taking Control of Corporate Discovery: What It Means for Outside Counsel (New York, NY July 21, 2016).
- 517. "Legal Ethics and Artificial Intelligence: Is It Time to Regulate AI?," with John Barkett, Wendy Wen Yun Chang, and Ed Walters, Bloomberg BNA Webinar (Aug. 25, 2016).
- 518. "Judge Scheindlin: Looking Back, Looking Ahead," Keynote Address with Hon. Shira A. Scheindlin, 2016 Conference on Preservation Excellence ("PREX16") (Portland, OR Sept. 14, 2016).
- 519. "Preservation and Privacy Beyond Safe Harbor," with Woods Abbott, Hon. Andrew J. Peck, and Jeane A. Thomas, 2016 Conference on Preservation Excellence ("PREX16") (Portland, OR Sept. 15, 2016).
- 520. "Amendments to the Federal Rules of Civil Procedure and Their Impact on eDiscovery The First Year," with Thomas Y. Allman and Ariana J. Tadler, Practicing Law Institute's ("PLI's") Electronic Discovery

- Institute 2016: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 19, 2016).
- 521. "eDiscovery and Information Governance in Office 365," with John P. Collins, DTI Global Lunch Seminar (New York, NY Sept. 20, 2016).
- 522. "Technology 2020 and Case Study on 'Possession, Custody, and Control': What ESI Does Your Client 'Control' in Today's Digital World?," with Kevin F. Brady, Hon. John M. Facciola, Jason L. Lichtman, Hon. Andrew J. Peck, and Paul Weiner, Sandpiper Partners Third Annual Innovation in E-Discovery Conference (New York, NY Sept. 28, 2016).
- 523. "Preservation, Production, and Sanctions Under the New Rules: Developing New Techniques Early in the Matter to Avoid Costly Missteps," with Kevin F. Brady, Nicole Eichberger, Hon. James C. Francis, IV, Henry J. Kelston, David J. Lender, Hon. Frank Maas, Karin Scholz Jenson, and Kiriaki Tourikis, Sandpiper Partners Third Annual Innovation in E-Discovery Conference (New York, NY Sept. 28, 2016).
- 524. "Cross-Border Data Protection, Data Security, Privacy: Top of Agenda," with Hon. Joseph A. Dickson, Nicole Eichberger, David J. Lender, Hon. Andrew J. Peck, David C. Shonka, and Kelli J. Stenstrom, Sandpiper Partners Third Annual Innovation in E-Discovery Conference (New York, NY Sept. 28, 2016).
- 525. "What Does Attorney Competence Mean When It Comes to Handling Electronic Discovery?," with Anthony Harwood, Hon. Ronald J. Hedges, and Scott Reents, New York State Bar Association Program on Legal Ethics in the Digital Age (New York, NY Sept. 29, 2016).
- 526. "The Do's and Don'ts of Attorney Social Media Use and Advice," with Michael Fox, Ignatius Grande, and Scott Malouf, New York State Bar Association Program on Legal Ethics in the Digital Age (New York, NY Sept. 29, 2016).
- 527. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Sept. 29, 2016).
- 528. "Mock Hearing on Technology-Assisted Review," with Lea Malani Bayes and Hon. Andrew J. Peck, National eDiscovery Leadership Institute at the University of Missouri-Kansas City School of Law (Kansas City, MO Oct. 21, 2016).
- 529. "Search Syntax Dispelling Myths About Keyword Search," with Kathryn J. Manning and Crystal O'Donnell, Ontario Bar Association and Law Society of Upper Canada 2016 Ontario eDiscovery Institute (Toronto, ON Oct. 25, 2016).
- 530. "Machine Learning When and How to Use It," with Scott Hunter and Kathryn J. Manning, Ontario Bar Association and Law Society of Upper Canada 2016 Ontario Bar Association eDiscovery Institute (Toronto, ON Oct. 25, 2016).
- 531. "Fundamentals of Technology-Assisted Review and Federal Rule of Evidence 502," Guest Lecture at Judge Thomas I. Vanaskie's Electronic Evidence Course at Penn State Dickson Law School (Oct. 27, 2016).
- 532. "Competence and Supervision Issues Arising Out of Electronic Information," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Amy Walker Wagner, The Ethics of Electronic Information: Competence, Confidentiality, and Other Ethical Conundrums, Practicing Law Institute ("PLI")

- Continuing Legal Education ("CLE") Program (New York, NY Nov. 2, 2016).
- 533. "Protecting Attorney-Client Privilege, Work Product, and Client Confidences When Working with Electronic Information," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Amy Walker Wagner, The Ethics of Electronic Information: Competence, Confidentiality, and Other Ethical Conundrums, Practicing Law Institute ("PLI") Continuing Legal Education ("CLE") Program (New York, NY Nov. 2, 2016).
- 534. "Ethical Implications of Social Media and Electronic Filing," with Hon. Ronald J. Hedges, Shawndra G. Jones, and Amy Walker Wagner, The Ethics of Electronic Information: Competence, Confidentiality, and Other Ethical Conundrums, Practicing Law Institute ("PLI") Continuing Legal Education ("CLE") Program (New York, NY Nov. 2, 2016).
- 535. "TAR and Analytics Deep Dive for Lawyers," Technology in Practice 2016 (Toronto, Canada Nov. 3, 2016).
- 536. "TAR 2.0 The Art of Concurrent Workflows," with Yvette Bula and Peter Sanford, Technology in Practice 2016 (Toronto, Canada Nov. 3, 2016).
- 537. "The Prodigal Son How Law Firms are Regaining Control of Document Review," with Jessica Lockett, Sean Lynch, and Daniel Nyman, Technology in Practice 2016 (Toronto, Canada Nov. 4, 2016).
- 538. "The Use of Advanced Analytics and Technology-Assisted Review in Government Investigations and Litigation," with Patrick McCulloch and Glenn Melcher, Deloitte Government eDiscovery Think Tank (Rosslyn, VA Nov. 9, 2016).
- 539. "Technology-Assisted Review: Fact or Fiction?," at the Washington DC Bar Association eDiscovery and Information Governance Committee Meeting (Washington, DC Nov. 9, 2016).
- 540. "An Overview of the Custodian Tracking System (CTS) and eDiscovery Playbook at ConocoPhillips," with Sheldon M. Patterson, George R. Pawloski, Mirna Sirbegovic, and Michael S. Stinson, Presentation for the Legal Department at ConocoPhillips (Houston, TX Nov. 10, 2016).
- 541. "TREC 2016 Total Recall Track Overview," National Institute of Standards and Technology ("NIST") 2016 Text REtrieval Conference ("TREC") (Gaithersburg, MD Nov. 16, 2016).
- 542. "Big Data and New Technology: Implications for the Ethical Practice of Law," with Luis J. Diaz, David H. Schwartz, and Mark S. Sidoti, Gibbons Tenth Annual E-Discovery and Ethics Conference (Orange, NJ Nov. 18, 2016).
- 543. "Technology-Assisted Review: Fact or Fiction?," Guest Lecture at Gordon V. Cormack's Designing Functional Programs (Advanced Version) Course at the David R. Cheriton School of Computer Science at the University of Waterloo (Waterloo, ON Dec. 1, 2016).
- 544. "Rule 26(b)(1): How to Make a Persuasive Proportionality Argument," with Hon. Joy Flowers Conti and Michael Hamilton, Exterro Webinar for eDiscovery Day 2016 (Dec. 1, 2016).
- 545. "Technology-Assisted Review: Fact or Fiction?," Arizona State University ("ASU") Arkfeld Legal Analytics and Big Data Workshop (Phoenix, AZ Dec. 8, 2016).

- 546. "Fundamentals of Electronic Discovery," U.S. DOJ Tax Division eDiscovery Training Program (Washington, DC Dec. 12, 2016).
- 547. "Fundamentals of Search," U.S. DOJ Tax Division eDiscovery Training Program (Washington, DC Dec. 13, 2016).
- 548. "Technology-Assisted Review: Plain and Simple," Deloitte Government Continuing Legal Education ("CLE") Program (Rosslyn, VA Dec. 14, 2016).

- 549. "The Ethics of Social Media: What Attorneys May and May Not Do," with Hon. Ronald J. Hedges, Federal Bar Association Webinar (Jan. 7, 2015).
- 550. "Ethical Considerations in E-Discovery," with Hon Ronald J. Hedges, Guest Lecture at Hon. Ronald J. Hedges' E-Discovery (Electronically Stored Information—ESI) Course at the Mississippi College School of Law (Jan. 13, 2015).
- 551. "Privilege and Work Product in E-Discovery," with Hon. Ronald J. Hedges, Guest Lecture at Hon. Ronald J. Hedges' E-Discovery (Electronically Stored Information—ESI) Course at the Mississippi College School of Law (Jan. 13, 2015).
- 552. "How Do I Bring Value to My Organization . . . and Continue to Elevate and Accelerate My Career?," with Dera J. Nevin, 2015 Kick-Off of the Cowen Group Leadership Breakfast Roundtable Series (New York, NY Jan. 15, 2015).
- 553. "Preservation Case Law Judges and Experts Evaluate the Top Five Opinions of 2014," with Michael Arkfeld, William P. Butterfield, Hon. James C. Frances IV, Hon. Ronald J. Hedges, and Hon. Frank S. Maas," Legal Hold Pro / Zapproved, Inc. Super Session at LegalTech New York 2015 (New York, NY Feb. 3, 2015).
- 554. "Taking TAR to the Next Level: Recent Research and the Promise of Continuous Active Learning," with Gordon V. Cormack, Susan Nielsen Hammond, Hon. Andrew J. Peck, and John Tredennick, Catalyst Repository Systems Plenary Session at LegalTech New York 2015 (New York, NY Feb. 3, 2015).
- 555. "In Search of the Right Search: Keywords, Manual Review, or Technology-Assisted Review (a.k.a. Predictive Coding)?," Guest Lecture at William P. Butterfield and Allison Stanton's eDiscovery Course at American Law School (Washington, DC Feb. 10, 2015).
- 556. "A User's Guide to Technology-Assisted Review Using The Sauce," with Gordon V. Cormack, Wachtell, Lipton, Rosen & Katz Continuing Legal Education ("CLE") Program (New York, NY Feb. 11, 2015).
- 557. "A Paralegal's Guide to Technology-Assisted Review Using The Sauce," with Gordon V. Cormack, Wachtell, Lipton, Rosen & Katz Training Program (New York, NY Feb. 12, 2015).
- 558. "E-Discovery: Sanctions and Spoliation What a Judge Needs to Know," with Hon. Daniel Crothers and Hon. Thomas Zonay, National Judicial College / Institute for the Advancement of the American Legal System Webcast (Feb. 18, 2015).

- 559. "Technology-Assisted Review, Especially Predictive Coding," Guest Interview for Michael Carbone and Allison Walton's eDiscovery Skills Course at the UC Hastings College of the Law (Feb. 24, 2015).
- 560. "ESI and White Collar Cases: Compliance Strategies, Corporate Governance, and Ethics," with Hon. James C. Frances IV, Hon. Ronald J. Hedges, Howard Bruce Klein, and Justin P. Murphy, American Law Institute Continuing Legal Education ("ALI CLE") Live Videocast Program" (Philadelphia, PA Feb. 26, 2015).
- 561. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY March 5, 2015).
- 562. "Keynote Address: Welcome to Tomorrow," with Hon. Shira A Scheindlin and Joy Allen Woller, Fourth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference: Know the Law, Know the Technology (Tempe, AZ March 11, 2015).
- 563. "I Feel the Need, the Need for Speed (TAR)," with Hon. John M. Facciola, Scott A. Kane, Ariana J. Tadler, and John Tredennick, Fourth Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference: Know the Law, Know the Technology (Tempe, AZ March 11, 2015).
- 564. "Technology-Assisted Review (TAR) for (Almost) Any Case," with Thomas C. Gricks, III and Jeane Thomas, The Ninth Annual The Sedona Conference Institute ("TSCI") Program on eDiscovery: Staying Ahead of the eDiscovery Curve and Keeping Pace With the New Rules (Nashville, TN March 19, 2015).
- 565. "The 2015 eDiscovery Judicial Roundtable," with Hon. Joe B. Brown, Hon. William C. Koch, Hon. Kristin L. Mix, and Hon. Andrew J. Peck, The Ninth Annual The Sedona Conference Institute ("TSCI") Program on eDiscovery: Staying Ahead of the eDiscovery Curve and Keeping Pace With the New Rules (Nashville, TN March 20, 2015).
- 566. "Scope and Limits of Government Investigations of Data Breaches," with Christopher Cole, Samantha Green, Deborah Morris, and Allison Stanton, Government Investigations 2015: Electronic Information in Investigation and Response, Practicing Law Institute ("PLI") (New York, NY March 23, 2015).
- 567. "Responding to Government Investigations and Handling Parallel Proceedings," with Celeste Chase, John Einstman, Manfred J. Gabriel, Anthony Galioto, Ignatius A. Grande, Tracy Greer, Joseph P. Guglielmo, and Jeane A. Thomas, Government Investigations 2015: Electronic Information in Investigation and Response, Practicing Law Institute ("PLI") (New York, NY March 23, 2015).
- 568. "Breaking Bad in the Digital Age: Ethics and Social Media," Wachtell, Lipton, Rosen & Katz Continuing Legal Education ("CLE") Program for Attorneys (New York, NY Apr. 8, 2015).
- 569. "Fundamentals of Technology-Assisted Review Using Predictive Coding," Clear Law Institute Continuing Legal Education ("CLE") Webinar (Apr. 14, 2015).
- 570. "Breaking Bad in the Digital Age: Ethics and Social Media," Wachtell, Lipton, Rosen & Katz Continuing Legal Education ("CLE") Program for Paralegals (New York, NY Apr. 22, 2015).

- 571. "Judicial Roundtable on eDiscovery," with Hon. Hildy Bowbeer, Hon. Terrence P. Kemp, Hon. Andrew J. Peck, Hon. Irma C. Ramirez, Hon. Lee Rosenthal, and Hon. Craig Shaffer, The Sedona Conference Working Group 1 Mid-Year Meeting (Dallas, TX April 30, 2015).
- 572. "The 2015 Judicial Roundtable: A Judicial Perspective on eDiscovery," with Hon. John M. Facciola, Hon. Paul S. Grewal, and Hon. Frank S. Maas, Deloitte Government Symposium (Washington, DC May 21, 2015).
- 573. "'Meet and Confer' Demonstrations," with Craig D. Ball, Hon. John M. Facciola, and Thomas O'Connor, Georgetown eDiscovery Training Academy (Washington, DC May 31, 2015).
- 574. "Technology-Assisted Review and Enhanced Search," Georgetown eDiscovery Training Academy (Washington, DC June 2, 2015).
- 575. "The Collections Process," with Mark S. Sidoti, Georgetown eDiscovery Training Academy (Washington, DC June 3, 2015).
- 576. "Mock 26(f) Conferences," with Hon. Nan R. Nolan, Georgetown eDiscovery Training Academy (Washington, DC June 5, 2015).
- 577. "Ethics and Social Media: What Every Attorney Should Know," Clear Law Institute Continuing Legal Education ("CLE") Webinar (June 11, 2015).
- 578. "Ethics and Social Media: What Attorneys Need to Know," Bloomberg BNA Webinar (July 9, 2015).
- 579. "Taking TAR to the Next Level: Recent Research and the Promise of Continuous Active Learning," with Gordon V. Cormack, Erin E. Harrison, Emi Ohira, and John Tredennick, Catalyst Repository Systems Plenary Session at Legaltech West Coast 2015 (San Francisco, CA July 13, 2015).
- 580. "Introduction to the Third Edition of Electronic Discovery and Digital Evidence," with Daniel Capra, Hon. Shira A. Scheindlin, and Kenneth J. Withers, Sedona Conference Webinar (July 14, 2015).
- 581. "Machine-Learning Protocols for Technology-Assisted Review in eDiscovery," at Google with Gordon V. Cormack (July 15, 2015).
- 582. "The Practical Implications of the Proposed Federal Rules of Civil Procedure ("FRCP") Amendments (Effective December 1, 2015)," with Robert D. Brownstone, Wendy Butler Curtis, Scott Kessler, and Gina Trimarco, Today's General Counsel and Institute "The Exchange" eDiscovery for the Corporate Market Program (New York, NY July 20, 2015).
- 583. "E-Discovery in Investigations: A Different Context," with Taylor Hoffman, Farrah Pepper, James A. Sherer, Robert E. Singleton, and Amie Taal, Today's General Counsel and Institute "The Exchange" eDiscovery for the Corporate Market Program (New York, NY July 20, 2015).
- 584. "Developments in Search," with David Grant, Andre Guilbeau, Chuck Kellner, Thomas O'Connor, and Robert E. Singleton, Today's General Counsel and Institute "The Exchange" eDiscovery for the Corporate Market Program (New York, NY July 20, 2015).
- 585. "Data Review Process," Practicing Law Institute ("PLI") Nuts and Bolts of Electronic

- Discovery 2015 Program (New York and Live Webcast Sept. 1, 2015).
- 586. "Technology-Assisted Review: Where Are We and Where Are We Going?," with Gilbert S. Keteltas, Practicing Law Institute ("PLI") Electronic Discovery Institute 2015: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 2, 2015).
- 587. "Fundamentals of Technology-Assisted Review," Guest Lecture at Judge Thomas I. Vanaskie's Electronic Evidence Class at Penn State Law and Penn State Dickson Law Schools (Carlisle, PA Sept. 24, 2015).
- 588. "Successful Discovery Strategies," with Brian Chebli, Erica Devila, Dera J. Nevin, and Denise Scofield, at JPMorgan Chase Law Firm Discovery Liaison Training Day (New York, NY Sept. 28, 2015).
- 589. "Fundamentals of Electronic Discovery for New Associates," with Claudia T. Morgan and Luis A. McNish, Wachtell, Lipton, Rosen & Katz New Associate Training Program (New York, NY Sept. 29, 2015).
- 590. "Trending Now: #Ethics, #Social Media, #eDiscovery, #Competence, and #Cloud Computing," Deloitte Government Continuing Legal Education ("CLE") Program (Arlington, VA Oct. 14, 2015).
- 591. "2015 Amendments to the Federal Rules of Civil Procedure: Judicial Discussion of eDiscovery Implications," with Hon. Sheila Finnegan, Hon. Nan R. Nolan, Hon. Craig B. Shaffer, and Hon. Amy J. St. Eve, Seventh Circuit Pilot Project Webinar (Chicago, IL Oct. 14, 2015).
- 592. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Oct. 15, 2015).
- 593. "Technology-Assisted Review in eDiscovery," with Philip J. Favro and Ariana J. Tadler, at Benjamin N. Cardozo Data Law Initiative ("CDLI") Lunch Speakers Series (New York, NY Oct. 19, 2015).
- 594. "Fundamentals of Electronic Discovery for New Associates," with Claudia T. Morgan and Luis A. McNish, Wachtell, Lipton, Rosen & Katz New Associate Training Program I (New York, NY Oct. 20, 2015).
- 595. "Technology-Assisted Review for Electronic Discovery," Guest Speaker at Kathryn Hume's Legal Practice Legal Technology Course at the University of Calgary Faculty of Law (Oct. 26, 2015).
- 596. "Is Electronic Discovery Dead?," Keynote Address at the Ontario Bar Association 2015 eDiscovery Institute (Toronto, Canada Oct. 29, 2015).
- 597. "Inverting the Pyramid: Non-Linear Approaches to Document Review as the New Standard," with Yvette Bula, Marlon Hylton, and Crystal O'Donnell, Commonwealth Legal / A Division of Ricoh Canada Inc. Technology in Practice 2015 Conference (Toronto, Canada Nov. 5, 2015).
- 598. "The Ethical Implications of Electronically Stored Information," with Hon. Ronald J. Hedges and Amy Walker Wagner, American Law Institute Continuing Legal Education ("ALI CLE") Program (Philadelphia, PA Nov. 10, 2015).

- 599. "TREC 2015 Total Recall Track Overview Talk," with Adam Roegiest (Gaithersburg, MD Nov. 18, 2015).
- 600. "Getting Stuck in TAR: Arguing the Big Issues Surrounding Predictive Coding," with David Cohen, Thomas C. Gricks, III, Chuck Kellner, and Hon. Andrew J. Peck, The Twelfth Georgetown University Law Center Advanced eDiscovery Institute (Washington, DC Nov. 19, 2015).
- 601. "TREC 2015 Total Recall Plenary Session," with Gordon V. Cormack, Ralph C. Losey, Mihai Lupu, Jeremy Pickens, and Hoatian Zhang (Gaithersburg, MD Nov. 20, 2015).
- 602. "A Change for the Better?: The 2015 Amendments to the Federal Rules of Civil Procedure Part I (Rules 26(d)(2), 34(b)(2)(B), 34(b)(2)(C), and 37(e)," with Michael Arkfeld, Hon. James C. Francis IV, and Hon. Shira A Scheindlin, LexisNexis University On- Demand Continuing Legal Education ("CLE") Program (New York, NY Nov. 24, 2015).
- 603. "A Change for the Better?: The 2015 Amendments to the Federal Rules of Civil Procedure Part II (Rules 1, 4(m), 16(b), 26(b)(1), 26(c)(1), and 26(f)," with Michael Arkfeld, Hon. James C. Francis IV, and Hon. Shira A Scheindlin, LexisNexis University On- Demand Continuing Legal Education ("CLE") Program (New York, NY Nov. 24, 2015).
- 604. "Legal Hold Orders: What's New and What's Not," for the Litigation Services Group at ConocoPhillips (Houston, TX Dec. 1, 2015).
- 605. "Applying Your Computer Science Skills to Real World Applications," Guest Lecture at two sections of Gordon V. Cormack's Elementary Algorithm Design and Data Abstraction Course at the David R. Cheriton School of Computer Science, University of Waterloo (Waterloo, ON Dec. 3, 2015).
- 606. "2015 eDiscovery Update: Trends and Developments Under the FRCP and Beyond," with Hon. James C. Francis IV, Hon. Ronald J. Hedges, and Jeane A. Thomas, American Law Institute Continuing Legal Education ("ALI CLE") Webinar (Dec. 8, 2015).
- 607. "How Will New Rule 26(b)(1) and Proportionality Impact Search and the Use of Search Terms?," with Hon. Joy Flowers Conti, Karin Scholz Jensen, David J. Kessler, Hon. Andrew J. Peck, and Kiriaki Tourikis, Sandpiper Partners Second Annual Conference on Innovation in eDiscovery (New York, NY Dec. 9, 2015).
- 608. "An Overview of the 2015 Amendments to the Federal Rules of Civil Procedure," Continuing Legal Education ("CLE") Program for the Legal Discovery Management and Litigation Groups at JPMorgan Chase & Co. (New York, NY Dec. 22, 2015).

- 609. "TAR Best Practices: Tools, Techniques, and Validation Methods," with Gordon V. Cormack, Deloitte Discovery Continuing Legal Education ("CLE") Program for Government Attorneys (Washington, DC Jan. 15, 2014).
- 610. "Doing It Right: Combining Technology and Cooperation in eDiscovery," with Conor R. Crowley, David S. Leone, Ronni Solomon, and Ariana J. Tadler, Daegis Educational Session: eDiscovery Track at LegalTech New York 2014 (New York, NY Feb. 4, 2014).

- 611. "The Evolution, Uses, and Case Studies of Technology-Assisted Review," with Eric Crespolini, Anthony Diana, and Hon. David J. Waxse, HP Autonomy Educational Session: Information Governance Track at LegalTech New York 2014 (New York, NY Feb. 4, 2014).
- 612. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Feb. 20, 2014).
- 613. "A.I. ('Artificial Intelligence') Enhanced Review," with Hon. Joy Conti, Jon Lavinder, Johnny G. Lee, Ralph C. Losey, and Hon. David J. Waxse, eDiscovery Intelligence's eDiscovery Project Management 2014 (Atlanta, GA Feb. 27, 2014).
- 614. "eDiscovery in Government and Regulatory Investigations," with Elizabeth J. Cambpell and Ronni Solomon, eDiscovery Intelligence's eDiscovery Project Management 2014 (Atlanta, GA Feb. 27, 2014).
- 615. "Judicial Roundtable," with Hon. Ralph Artigliere, Hon. John Carroll, Hon. Joy Conti, and Hon David J. Waxse, eDiscovery Intelligence's eDiscovery Project Management 2014 (Atlanta, GA Feb. 27, 2014).
- 616. "eDiscovery From the Perspective of the Client, Plaintiff's Counsel, and the Bench," with Wayne C. Matus, Hon. Nan R. Nolan, and Ariana J. Tadler, Wachtell Lipton Rosen & Katz Continuing Legal Education ("CLE") Program (New York, NY Mar. 5, 2014).
- 617. "Keynote Address on the Hottest Topics in eDiscovery" with Hon. Shira A. Scheindlin, at the Third Annual eDiscovery and Digital Evidence Conference: Essential Skills and Cutting-Edge Strategies, Sponsored by the Center for Law, Science & Innovation at the Sandra Day O'Connor College of Law in Collaboration with Michael Arkfeld (Tempe AZ Mar. 12, 2014).
- 618. "Technology-Assisted Review," with Jason R. Baron, Jerone J. English, Hon. Andrew J. Peck, Paul E. Burns and Eric J. Schwartz, The 8th Annual Sedona Conference Institute eDiscovery ("TSCI") Program (Houston, TX Mar. 13, 2014).
- 619. "Managing the eDiscovery Process / Making the Business Case for eDiscovery," with Gavin Manes, Robert D. Owen, Hon. Andrew J. Peck, and Kenneth Prine, The 8th Annual Sedona Conference Institute ("TSCI") Program (Houston, TX Mar. 13, 2014).
- 620. "Fundamentals of Technology-Assisted Review I," for the New Mexico Chapter of the Federal Bar Association (Albuquerque, NM Mar. 19, 2014).
- 621. "Fundamentals of Technology-Assisted Review II," for the New Mexico Chapter of the Federal Bar Association (Albuquerque, NM Mar. 19, 2014).
- 622. "Responding to a Government Investigation," with Manfred J. Gabriel, Peter C. Harvey, Jeane A. Thomas, and Michelangelo Troisi, Practicing Law Institute ("PLI") Program on Government Investigations 2014: The Role of Electronic Information in Investigation and Response (New York, NY Mar. 24, 2014).
- 623. "The Sedona Conference Webinar on the Latest Commentaries on Search of ESI and Achieving Quality in the eDiscovery Process," with Jason R. Baron, Hon. James C. Francis IV, and Jeffrey C. Sharer, The Sedona Conference Voices From the Dessert Webinar Series (Mar. 27, 2014).

- 624. "Technology Flashpoints: TAR, Data Protection, and Dispute Resolution," with Linda Clark, John M. Barkett, and Al Saikali, 16th Annual American Bar Association ("ABA") Section of Dispute Resolution 2014 Spring Conference (Miami, FL Apr. 3, 2014).
- 625. "Introduction to International Electronic Discovery, Data Privacy, and Cross-Border Transfers: From Aerospatiale to Now," with Hon. Elizabeth D. Laporte, Hon. Richard A. Kramer, David Shonka, and Kenneth J. Withers, The Sedona Conference Institute ("TSCI") Program on Cross-Border Discovery and Data Protection Laws (San Francisco, CA Apr. 9, 2014).
- 626. "Predictive Coding on Trial," with Paul E. Burns, Jerone J. English, and Hon. Craig Shaffer, American Bar Association ("ABA") Section on Litigation Continuing Legal Education ("CLE") Program (Scottsdale, AZ Apr. 10, 2014).
- 627. "Technology-Assisted Review at Wachtell, Lipton, Rosen & Katz," with Gordon V. Cormack, Training Program for the Automated Litigation Support ("ALS") Department at Wachtell, Lipton, Rosen & Katz (Apr. 24, 2014).
- 628. "Technology-Assisted Review (a.k.a. Predictive Coding) and Other E-Discovery Search Issues," with Hon. Andrew J. Peck, Federal Judicial Center ("FJC") National Workshop for Magistrate Judges I (San Antonio, TX May 1, 2014).
- 629. "Defending the eDiscovery Process: Burdens, Standards, and Best Practices," with Sandra Rampersaud, Scott Reents, Brendan M. Schulman, and Hon. Craig B. Shaffer The Sedona Conference Working Group 1 Mid-Year Meeting (Miami, FL May 8-9, 2014).
- 630. "In Search of the Right Search: Keywords, Manual Review, or Technology-Assisted Review," with Hon. Sheila Finnegan, Niloy Ray, and Hon. Geraldine Soat Brown, Seventh Circuit Bar Association 63rd Annual Meeting and Conference (Chicago, IL May 12, 2014).
- 631. "A Conversation with Judges Allegra, Anderson, Facciola and Maas on the Hottest Topics in eDiscovery," with Hon. Francis M. Allegra, Hon. John F. Anderson, Hon. John M. Facciola, and Hon. Frank Maas, Deloitte Electronic Discovery Symposium for Government Agencies: Innovation and eDiscovery (Washington, DC May 15, 2014).
- 632. "Something Just Isn't Right Here: Challenging and Defending the eDiscovery Process," with Jason R. Baron, Conor R. Crowley, and Hon. Andrew J. Peck, Eighth Annual American Bar Association ("ABA") National Institute on e Discovery (New York, NY May 16, 2014).
- 633. "Meet and Confer' Demonstrations," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 1, 2014).
- 634. "Realizing Your Goals for the Academy," with Craig Ball, Hon. John M. Facciola, and Tom O'Connor, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 1, 2014).
- 635. "Technology-Assisted Review and Enhanced Search," 2014 Georgetown eDiscovery Training Academy (Washington, DC June 3, 2014).
- 636. "The Courts and Predictive Coding: Where They Are and Where They Are Going," with Craig Ball, Hon. John M. Facciola, and Mark S. Sidoti, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 3, 2014).

- 637. "The Collections Process," with Mark S. Sidoti, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 4, 2014).
- 638. "Ethics," with Craig Ball, Hon. John M. Facciola and Mark S. Sidoti, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 4, 2014).
- 639. "Anticipating the Future, with Craig Ball, Hon. John M. Facciola, and Mark S. Sidoti, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 4, 2014).
- 640. "Privacy," with Craig Ball, John M. Facciola, Tom O'Connor, and Mark S. Sidoti, 2014 Georgetown eDiscovery Training Academy (Washington, DC June 5, 2014).
- 641. "Fundamentals of E-Discovery for State Court Judges," with Hon. Daniel Crothers and Hon. Thomas Zonay, National Judicial College / Institute for the Advancement of the American Legal System Webcast (June 11, 2014).
- 642. "Technology and Litigation: What Is Really Happening in E-Discovery and What Will the Future Look Like," with Dean David F. Levi, Francis McGovern, Hon. Lee Rosenthal, Ian Wilson, and Jun Yang, Master of Judicial Studies Program Judges' Seminar, Duke University School of Law Center for Judicial Studies (Durham, NC June 13, 2014).
- 643. "Predictive Coding: Trends and Challenges," with Jay Leib, Martha Louks, Constantine Pappas, Karl Schieneman, and Geoffrey A. Vance, McDermott Will & Emery 2014 Technology in the Law Symposium Big Data: Transforming Costly Chaos into Valuable Intelligence (Chicago, IL June 19, 2014).
- 644. "Evaluation of Machine-Learning Protocols for Technology-Assisted Review in Electronic Discovery," with Gordon V. Cormack, SIGIR '14 (Gold Coast, Queensland, Australia July 8, 2014).
- 645. "Technology-Assisted Review (a.k.a. Predictive Coding) and Other E-Discovery Search Issues," with Hon. Andrew J. Peck, Federal Judicial Center ("FJC") National Workshop for Magistrate Judges II (Philadelphia, PA July 24, 2014).
- 646. "Building an Enlightened Legal Hold Plan," with Craig Ball, David Cohen, Hon. Frank Maas, and Dawn Radcliffe, Third Annual Conference on Preservation Excellence ("PREX-14"), Sponsored by LegalHold Pro (Portland, OR Sept. 10, 2014).
- 647. "Addressing the Cost of Preservation," with Craig Ball, Brad Ellis, Tony Knappen, and Charlotte Riser-Harris, Third Annual Conference on Preservation Excellence ("PREX-14"), Sponsored by LegalHold Pro (Portland, OR Sept. 10, 2014).
- 648. "Legal Holds Without Borders," with Hon. Paul Grewal, Dawn Radcliffe, and Jeane Thomas, Third Annual Conference on Preservation Excellence ("PREX-14"), Sponsored by LegalHold Pro (Portland, OR Sept. 10, 2014).
- 649. "Search and Review" with Heather Caputo, Jerone J. English, Hon. James C. Francis IV, Kathryn (Kit) Goetz, Daniel Kulakofsky, Hon. Nan R. Nolan, Hon. Andrew J. Peck, and Hon. Craig B. Shaffer Electronic Discovery Institute Distance Learning Program (New York, NY Sept. 16, 2014).

- 650. "Fundamentals of Electronic Discovery for New Associates," with Claudia T. Morgan and Luis A. McNish, Wachtell, Lipton Rosen & Katz New Associate Training Program I (New York, NY Sept. 16, 2014).
- 651. "Technology-Assisted Review: Opportunities and Challenges," New York eDiscovery Counsel Round Table (New York, NY Sept. 18, 2014). [12:30 2:00 PM]
- 652. "E-Discovery: An Interactive Discussion of Advanced Search Technologies Including Technology-Assisted Review," Institute on Complex Commercial Litigation at the Benjamin N. Cardozo School of Law at Yeshiva University (New York, NY Sept. 22, 2014).
- 653. "Technology-Assisted Review: Where We Are and Where Are We Going?," with Gilbert S. Keteltas and Brian C. Rocca, Practicing Law Institute ("PLI") Electronic Discovery Institute 2014: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 30, 2104).
- 654. "Fundamentals of Electronic Discovery," Guest Lecturer at Karen Eltis' Internet Law Course at the University of Ottawa Faculty of Law (October 6, 2014).
- 655. "Fundamentals of Electronic Discovery," Guest Lecture at Brian Donnelly's, Conrad A. Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Oct. 9, 2014).
- 656. "Technology-Assisted Review ("TAR") Boot Camp," with Gordon V. Cormack, Deloitte Discovery Program for Government Lawyers (Washington, DC Oct. 15, 2014).
- 657. "Predictive Coding: Trends and Challenges," with Jay Leib, Martha Louks, Constantine Pappas, Karl Schieneman, and Geoffrey A. Vance, McDermott Will & Emery 2014 Technology in the Law Symposium Big Data: Transforming Costly Chaos into Valuable Intelligence (Washington, DC Oct. 16, 2014).
- 658. "Fundamentals of Electronic Discovery for New Associates," with Luis A. McNish, Wachtell, Lipton Rosen & Katz New Associate Training Program II (New York, NY Oct. 23, 2014).
- 659. "Beyond the Basics: Getting Started with Technology-Assisted Review," with Craig Ball, Gordon V. Cormack, Hon. Craig B. Shaffer, and Ariana J. Tadler, American Law Institute Continuing Legal Education "ALI CLE") Webinar (Oct. 24, 2014).
- 660. "Disputes Involving Technology-Assisted Review ('TAR') or Predictive Coding," with David Deppe, Gene Eames, Thomas C. Gricks, III, and Hon. Andrew J. Peck, Sandpiper Partners Innovation in eDiscovery Conference (New York, NY Oct. 29, 2014).
- 661. "The Judicial Roundtable," with Hon. John M. Facciola, Hon. James L. Gale, Hon. Frank Maas, Hon. Kristin L. Mix, Hon. Andrew Peck, Hon. Xavier Rodriguez, and Hon. Karla Spaulding, The Sedona Conference "All Voices" and Working Group 1 Annual Meeting (New Orleans, LA Nov. 6, 2014).
- 662. "Approaches to Validating TAR Efforts," with Gordon V. Cormack, Bruce Hedin, and David D. Lewis, The Sedona Conference "All Voices" and Working Group 1 Annual Meeting (New Orleans, LA Nov. 6, 2014).

- 663. "A Tour of TAR: Technologies, Workflows, and Case Law," with Annika K. Martin, Hon. Andrew J. Peck, and Carmen M. Rodriguez, The Sedona Conference "All Voices" and Working Group 1 Annual Meeting (New Orleans, LA Nov. 7, 2014).
- 664. "The Judicial Roundtable," with Hon. Joy Conti, Hon. Herbert L. Dixon, Hon. John M. Facciola, Hon. James C. Francis IV, Hon. Paul Grewal, Hon. Frank Maas, Hon. Kristin L. Mix, Hon. Andrew J. Peck, Hon. Xavier Rodriguez, Hon. Craig B. Shaffer, and Hon. David J. Waxse, The 11th Annual Georgetown Advanced eDiscovery Institute (Tyson's Corner, VA Nov. 20-21, 2014).
- 665. "eDiscovery: Update on Trends and Developments Under the FRCP and Beyond" with Hon. James C. Francis IV, Hon. Ronald J. Hedges, Jeane A. Thomas, American Law Institute Continuing Legal Education ("ALI CLE") Live Videocast Program (Philadelphia, PA Dec. 2, 2014).
- 666. "In Search of the Right Search: Keywords, Manual Review, or Technology-Assisted Review (a.k.a. Predictive Coding)?," Guest Lecturer at Craig Ball's Electronic Discovery and Digital Evidence Course at the School of Law of the University of Texas at Austin (Dec. 3, 2014).

- 667. "2012 eDiscovery Wrap-Up: What Happened in 2012 and What Do We Expect in 2013?," with Hon. Ronald J. Hedges and Jeane A. Thomas, Bloomberg BNA Webinar (Jan 15, 2013).
- 668. "Can a Computer Do It Better, Faster, and Cheaper—A Discussion of Technology-Assisted Review," with Shannon Capone Kirk, Thomas C. Gricks III, Richard Marcus, and Hon. Andrew J. Peck, at the American Bar Association's ("ABA's") eDiscovery and Digital Evidence ("EDDE") 2013 eDiscovery and Information Governance National Institute at the Stetson University College of Law (Tampa FL Jan. 24, 2013).
- 669. "The Computer Says These Are All the Documents That Are Relevant—A Mock Hearing on Technology-Assisted Discovery Production," with Hon. John M. Facciola, Thomas C. Gricks III, Hon. Paul W. Grimm, and Hon. Shira A. Scheindlin, at the American Bar Association's ("ABA's") eDiscovery and Digital Evidence ("EDDE") 2013 eDiscovery and Information Governance National Institute at the Stetson University College of Law (Tampa FL Jan. 24, 2013).
- 670. "E-Discovery and Ethics," with John M. Barkett, Hon. Shira A. Scheindlin, and Ethan Wall, at the American Bar Association's ("ABA's") eDiscovery and Digital Evidence ("EDDE") 2013 eDiscovery and Information Governance National Institute at the Stetson University College of Law (Tampa FL Jan. 25, 2013).
- 671. "Statistical Sampling to Enhance and Defend Your E-Discovery Practice," with Pallab Chakraborty, Gordon V. Cormack, Maureen O'Neill, and James K. Wagner Jr., SuperSession Panel at LegalTech 2013 New York (New York, NY Jan. 29, 2013).
- 672. "How Good is Your Predictive Coding Poker Face?," with Craig Ball, Ralph Losey, and Matthew Nelson, SuperSession Panel at LegalTech 2013 New York (New York, NY Jan. 29, 2013).
- 673. "Meaning Based eDiscovery: Case Studies and Lessons Learned from the Use of Predictive Coding and Advanced Analytics," with Thomas Lidbury, Jennifer Keadle Mason, George Tziahanas, and Alan Winchester, Plenary Session at LegalTech 2013 New York (New York, NY Jan. 30, 2013).

- 674. "The Grossman-Cormack Glossary of Technology-Assisted Review, with Foreword by John M. Facciola, U.S. Magistrate Judge," ESIBytes Podcast with Gordon V. Cormack, Hon. John M. Facciola, and Karl Schieneman (Feb. 13, 2013).
- 675. "Fundamentals of eDiscovery", with Jeremy R. Feinberg, Guest Lecture at Brian Donnelly's, Conrad Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Feb. 14, 2013).
- 676. "Preview of the Second Annual Arizona State University ("ASU") Arkfeld eDiscovery and Digital Evidence Conference: Challenges Facing Those Who Want to Use Technology-Assisted Review," with Michael R. Arkfeld, Hon. John M. Facciola, Joshua Gilliland, and Robert E. Singleton, Webinar (Feb. 19, 2013).
- 677. "eDiscovery and the Use of Predictive Coding: What Is It, How Does It Work, and Why Should Corporate Law Departments Use It?," with Gordon V. Cormack and Jerone J. English, at the GULC Corporate Counsel Institute (Washington, DC Mar. 8, 2013).
- 678. "Part I: Are We All Stuck in TAR?," with Mark Blaha, Matthew T. Clarke, and Scott A. Kane, eDiscovery and Digital Evidence Conference sponsored by the Center for Law, Science & Innovation at the Sandra Day O'Connor College of Law in Collaboration with Michael Arkfeld (Tempe AZ Mar. 14, 2013).
- 679. "Part II: TAR Not as Sticky as it Appears," with Mark Blaha, William P. Butterfield, and Matthew T. Clarke, eDiscovery and Digital Evidence Conference sponsored by the Center for Law, Science & Innovation at the Sandra Day O'Connor College of Law in Collaboration with Michael Arkfeld (Tempe AZ Mar. 14, 2013).
- 680. "Preservation and Discovery of ESI in Cloud-Based and Mobile Environments," with Jerone J. English, Amor A. Esteban, and Eric P. Mandel, The 7th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Living on eDiscovery's Cutting Edge (San Diego, CA Mar. 21, 2013).
- 681. "Technology-Assisted Review ('TAR'): What, Why, When, and How," with Paul E. Burns, Hon. James C. Francis IV, Kim-An Hernandez, Eric P. Mandel, and Sarah M. Padgitt, The 7th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Living on eDiscovery's Cutting Edge (San Diego, CA Mar. 21, 2013).
- 682. "The Evolution and Future of the eDiscovery Team," with Hon. James C. Francis IV, Colleen M. Kenney, Eric P. Mandel, and Sarah M. Padgitt, The 7th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Living on eDiscovery's Cutting Edge (San Diego, CA Mar. 22, 2013).
- 683. "Ethics and the Use of Technology: "Technology-Assisted Review" as But One Example of a New Technology," Guest Lecture at Jeremy Feinberg's Professional Responsibility Course at Columbia Law School (New York, NY Mar. 27, 2013).
- 684. "The Ethics Game Show Matrimonial and Family Law Edition," with Jeremy R. Feinberg, Nicole Hyland, Hon. Barbara Jaffe, and Wallace L. Larson, Jr., Practicing Law Institute ("PLI") Program (New York, NY Mar. 28, 2013).

- 685. "Technology-Assisted Review': What Is It, How Does It Work, and Why Should Corporate Law Departments Use It?," Continuing Legal Education ("CLE") Program at Gen Re (Stamford, CT Apr. 3, 2013).
- 686. "Government Investigations 2013: The Role of Electronic Information in Investigation and Response," with Hon. John M. Facciola, Manfred Gabriel, Peter C. Harvey, Justin P. Murphy, and David C. Shonka, Practicing Law Institute ("PLI") Program and Webcast (New York, NY Apr. 4, 2013).
- 687. "Choosing Your Technology: What Works Best, When and Why?," with Daniel Kulakofsky, Cecil A. Lynn III, and Mark Risk, Seventh Annual American Bar Association ("ABA") National Institute on E-Discovery (New York, NY Apr. 5, 2013).
- 688. "'Technology-Assisted Review': What Is It, How Does It Work, and Why Should Corporate Law Departments Use It?" at ConocoPhillips' Global Attorneys Meeting (Houston, TX Apr. 9, 2013).
- 689. "'Technology-Assisted Review': What It Is, How It Works, and Why You Should Use It," Guest Lecturer at Tanina Rostain's and Roger Skalbeck's Georgetown University Law Center Technology, Innovation, and Law Practice Course (Washington, DC Apr. 10, 2013).
- 690. "TAR Briefing," with Gordon V. Cormack, John Rabiej, John Rosenthal, and Ian Wilson, at the April Civil Rules Advisory Committee Meeting (Norman, OK Apr. 11, 2013).
- 691. "Technology-Assisted Review in Electronic Discovery," with Marc Wolinsky, at the Wachtell, Lipton, Rosen & Katz New York Client Seminar (New York, NY Apr. 16, 2013).
- 692. "Technology-Assisted Review': What Is it, How Does It Work, and Why Should You Use It?," eDiscovery Update 2013 for New York State Agencies, Office of the Attorney General Legal Education and Professional Development (Albany, NY Apr. 17, 2013).
- 693. "Ethical Issues in eDiscovery, Protecting Privilege, Social Media, and Data Security/Cloud Computing," eDiscovery Update 2013 for New York State Agencies, Office of the Attorney General Legal Education and Professional Development (Albany, NY Apr. 17, 2013).
- 694. "Panel 2: Opportunities Presented and Challenges Posed by Technology-Assisted Review," with Edward H. Cooper, Hon. John M. Facciola, Henry Kelston, and John Rosenthal, Duke Law Bench-Bar Distinguished Lawyers Conference on Technology-Assisted Review: A Critical Analysis (Washington DC Apr. 19, 2012).
- 695. "Panel 3: What is a Reasonable Technology-Assisted Review Process or Protocol?," with Jerone J. English, Hon. Paul W. Grimm, Thomas Metzloff, and John Rosenthal, Duke Law Bench-Bar Distinguished Lawyers Conference on Technology-Assisted Review: A Critical Analysis (Washington DC Apr. 19, 2012).
- 696. "Defense of Process: General Principles, and Culling, Search, and Review Principles," with Sarah Jane Gillett, Matthew Hammond, Christopher Q. King, Dean Kuckelman, Brendan M. Schulman, and Scott Reents, at the TSC WG1 Mid-Year Meeting and Steering Committee Retreat (St. Louis, MO Apr. 24-26, 2013).
- 697. "The Challenge of 'BYOD' and 'COPE': What's an Employer to Do?," with Conor R. Crowley and Ronal J. Hedges, Bloomberg BNA Webinar (May 7, 2013).

- 698. "Legal Ethics and the Cloud," with Jeremy R. Feinberg, Practicing Law Institute's (PLI's) Cloud Computing 2013: Cut Through the Fluff and Tackle the Critical Stuff (New York, NY May 10, 2013).
- 699. "A Lunchtime Viewing of the Seventh Circuit Pilot Project's Video of a Mock Meet-and-Confer Regarding Technology-Assisted Review, with Discussion," with Jennifer Keadle Mason, U.S. District Court for the Western District of Pennsylvania (Pittsburgh, PA May 13, 2013).
- 700. "Panel I: eDiscovery Basics," with Richard Marcus, Matthew Nelson, Jonathan Redgrave, and Allison Walton, at the Center for Negotiation and Dispute Resolution at the U.C. Hastings College of Law (San Francisco, CA May 16, 2013).
- 701. "Panel III: Using Technology," with Jerone J. English, Matthew Nelson, Steven VanLiere, and Allison Walton, at the Center for Negotiation and Dispute Resolution at the U.C. Hastings College of Law (San Francisco, CA May 16, 2013).
- 702. "Judicial Roundtable: Expectations for Best Practices and Proportionality," with Hon. Joy Conti, Hon. John M. Facciola, and Hon. Frank Maas, FC Business Intelligence Conference on eDiscovery Project Management (Pittsburgh, PA May 21, 2013).
- 703. "Friendly Fire at the Bar," with Thomas C. Gricks, III and Paul D. Weiner, FC Business Intelligence Conference on eDiscovery Project Management (Pittsburgh, PA May 21, 2013).
- 704. "Technology-Assisted Review': What It Is, How It Works, and Why Parties Should Use It," with Britt M. Miller, Educational Program for the Magistrate and District Judges of the Northern District of Illinois (Chicago, Ill. May 29, 2013).
- 705. "The Evolving Law on Search Techniques and Protocols," with Michael R. Arkfeld and Hon. John M. Facciola, Georgetown University Law Center eDiscovery Training Academy (Washington, DC June 5, 2013).
- 706. "Technology-Assisted Review and Enhanced Search," Georgetown University eDiscovery Training Academy (Washington, DC June 5, 2013).
- 707. "Third-Party, International Discovery, Privileged ESI, and Non-Waiver Agreements," with Michael R. Arkfeld and Hon. John M. Facciola, Georgetown University Law Center eDiscovery Training Academy (Washington, DC June 6, 2013).
- 708. "Faculty Roundtable: Putting the Judges on the Spot," with Hon. John M. Facciola, Georgetown University Law Center eDiscovery Training Academy (Washington, DC June 7, 2013).
- 709. "Technology-Assisted Review Emerging eDiscovery Tool: Leveraging TAR to Reduce the Time and Expense of eDiscovery," Strafford Publications Webinar (June 26, 2013).
- 710. "Search Technologies and Forward Thinking," with Richard Cohen and Hon. Andrew J. Peck, Today's General Counsel Institute: eDiscovery for the Corporate Market (New York, NY July 17, 2013).
- 711. "21st Century Considerations: Data Security, Social Media, and the Cloud," with Shawn Covard, Conor R. Crowley, and Cathy Story, Today's General Counsel Institute: eDiscovery for the Corporate Market (New York, NY July 18, 2013).

- 712. "The What, Why, When, and How of Technology-Assisted Review ("TAR")," with Steven Berrent, Emily Cobb, and Conor R. Crowley, The Sedona Conference Institute ("TSCI") New York (New York, NY July 25, 2013).
- 713. "Judicial Roundtable" "Tell Us What You Think About . . . ," with Hon. Timothy S. Driscoll, Hon. James C. Francis IV, Hon. John G. Koeltl, Hon. Frank Maas, Hon. Andrew J. Peck, Hon. Shira A. Scheindlin, and Hon. Margaret Smith, The Sedona Conference Institute ("TSCI") New York (New York, NY July 25, 2013).
- 714. "Developments in Electronic Discovery: Proposed Rules, Preservation, and Technology-Assisted Review," with Hon. David G. Campbell, Claire V. Eagan, and Hon. T. Lane Wilson, Tenth Circuit Judicial Conference, Session 1 of 2 (Colorado Springs, CO Aug. 30, 2013).
- 715. "Developments in Electronic Discovery: Proposed Rules, Preservation, and Technology-Assisted Review," with Hon. David G. Campbell, Claire V. Eagan, and Hon. T. Lane Wilson, Tenth Circuit Judicial Conference, Session 2 of 2 (Colorado Springs, CO Aug. 30, 2013).
- 716. "Search and Production Part I: A Technological Primer," with Jason R. Baron, Conor R. Crowley, and Hon. David J. Waxse, Federal Judicial Center ("FJC") eDiscovery Seminar for Federal Judges (Philadelphia, PA Sept. 10, 3013).
- 717. "Search and Production Part II: Challenges and Defenses," with Jason R. Baron, Conor R. Crowley, and Hon. David J. Waxse, Federal Judicial Center ("FJC") eDiscovery Seminar for Federal Judges (Philadelphia, PA Sept. 10, 2013).
- 718. "Local Initiatives and Proposed Amendments to the Federal Rules of Civil Procedure," with Hon. Ronald J. Hedges and Kenneth J. Withers, Federal Judicial Center ("FJC") eDiscovery Seminar for Federal Judges (Philadelphia, PA Sept. 11, 2013).
- 719. "Rule 502, Privilege, and Work Product," with Dan Capra and Hon. David J. Waxse, Federal Judicial Center ("FJC") eDiscovery Seminar for Federal Judges (Philadelphia, PA Sept. 11, 2013).
- 720. "Collection, Review, and Production: The Evolving Roles of People, Process, and Technology," with R. Stanton Dodge, Sean R. Gallagher, Patrick L. Oot, and David Thomson, Institute for the Advancement of the American Legal System ("IAALS") / The National Judicial College Second Annual Educational Summit for State Court Judges: Unlocking eDiscovery (Denver, CO Sept. 19, 2013).
- 721. "Crafting Model Orders, Guidelines, and Rules," with Thomas Y. Allman, William P. Butterfield, William F. Dressel, Steven S. Gensler, Hon. Paul W. Grimm, Rebecca Love Kourlis, IAALS / J5dicial College Second Annual Educational Summit for State Court Judges: Unlocking eDiscovery (Denver, CO Sept. 20, 2013).
- 722. "Technology-Assisted Review, Predictive Coding, and New Search Technologies," with Ashish S. Prasad and Brian Rocca, at Practicing Law Institute ("PLI") Electronic Discovery Institute 2013: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 24, 2013).
- 723. "An Introduction to Technology-Assisted Review," with John J. Rosenthal and Elizabeth Treubert Simon, Rossdale Continuing Legal Education ("CLE") Webinar on E-Discovery, Litigation Holds, and Metadata 101 (Sept. 25, 2013).

- 724. "Predictive Coding Won't Change My Practice and Other Fairy Tales," with Craig Ball. Hon. Paul W. Grimm, and Dera J. Nevin (Sept. 30, 2013).
- 725. "Predictive Coding," with David Kessler and Hon. Andrew J. Peck, at the E-Discovery Trial Advocacy Institute Presented by The Huron Legal Institute in Conjunction with Sandpiper Partners (New York, NY Oct. 1, 2013).
- 726. "Fundamentals of Electronic Discovery," Guest Lecturer at Brian Donelly's, Conrad Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age ("LDA") Clinic Course at Columbia Law School (New York, NY Oct. 3, 2013).
- 727. "Predicting Predictive Coding," with Jason R. Baron and Ralph C. Losey, IT-Lex Innovate Conference (Winter Park, FL Oct. 18, 2013).
- 728. "Technology Law and Ethics in the Information Age," with William Hamilton, Hon. Ronald J. Hedges, and Jason A. Pill, IT-Lex Innovate Conference (Winter Park, FL Oct. 18, 2013).
- 729. "Fundamentals of Electronic Discovery for New Associates," Wachtell, Lipton, Rosen & Katz New Associate Orientation, with Luis A. McNish and Claudia T. Morgan (New York, NY Oct. 22, 2013).
- 730. "Defending eDiscovery Process: Burdens, Standards, and Best Practices," with Scott Reents, Brendan Schulman, and Hon. Craig B. Shaffer, TSC WG1 Annual Meeting (Phoenix, AZ Nov. 7, 2013).
- 731. "Fundamentals of Technology-Assisted Review," Video Guest Lecturer at Craig Ball's eDiscovery Course at the University of Texas at Austin School of Law (Nov. 11, 2012).
- 732. "The Annual Judicial Roundtable," with Hon. John M. Facciola, Hon. James C. Francis IV, Hon. Paul W. Grimm, Hon. Frank Maas, Hon. Andrew J. Peck, and David Waxse," The Georgetown Advanced eDiscovery Institute (Ritz-Carlton, Tysons Corner VA Nov. 22, 2013).
- 733. "Fundamentals of Electronic Discovery," with Justice Deborah Chimes, Lync Videoconference for The Justice Robert H. Jackson Center Inn of Court in Jamestown, NY (Nov. 25, 2013).
- 734. "Predictive Coding for eDiscovery," Nineteenth Annual Advanced American Law Institute ("ALI") Conference on Life Insurance and Financial Services Litigation, (Washington, DC Dec. 5, 2013).

- 735. "The New York Pilot for Complex Litigation and E-Discovery Order," with Chris Dale, Karl A. Schieneman, and Ariana J. Tadler, ESIBytes Podcast (Jan. 9, 2011).
- 736. "A Primer on Technology-Assisted Review for Wachtell Lipton Paralegals," with Luis A. McNish, Wachtell, Lipton, Rosen & Katz Training Seminar (New York, NY Jan. 11, 2012).
- 737. "2012 E-Discovery Case Law Forecast: Hindsight is 20/20," with Dennis R. Kiker, Robert Rohlf, and Hon. David J. Waxse, Exterro Webinar (Jan. 12, 2012).
- 738. "Predictive Review: Combining the Human Element of Document Review with Machine Learning Technology," with James Andrews, Hon. Andrew J. Peck, Jessica Ross, and Ian Wilson, Servient Luncheon Program at Le Cirque (New York, NY Jan. 24, 2012).

- 739. "Man v. Machine: The Promise and Challenge of Predictive Coding and Other Disruptive Technologies," with Dean Gonsowski, Ralph C. Losey, and Hon. Andrew J. Peck, Symantec General Plenary Session at LegalTech New York 2012 (New York, NY Jan. 30, 2010).
- 740. "More Predictive Than Ever Predictive Coding, Predictive Costs and Predictive Outcomes New Techniques to Manage and Control Electronic Discovery," with Daniel Garrie, Kathryn ("Kit") Goetz, Joel M. Mitnick, and Warwick Sharp, Equivio Panel at LegalTech New York 2012 (New York, NY Jan. 30, 2010).
- 741. "Computer-Assisted Review: Streamlining Document Review in the Information Age," with Laura Kibbe, Hon. Andrew J. Peck, David Shonka, Senior Master Steven Whitaker, Epiq Supersession at LegalTech New York (New York, NY Jan. 31, 2012).
- 742. "Technology-Assisted Review ("TAR"): When to Use It and How to Defend It," with Ann Marie Gibbs, Ralph C. Losey, and Hon. Frank Maas, Daegis Panel at LegalTech New York (New York, NY Feb. 1, 2012).
- 743. "Judicial Panel Discussion: Evaluation, Assessment and Outcomes of Current Cases Involving eDiscovery," with Hon. Robert Biddlecombe Collings, Hon. Frank Maas, and Hon. Craig B. Shaffer, at Q1 Production's eDiscovery for Financial Services Conference (New York, NY Feb. 7, 2012).
- 744. "Using Advanced Search Technology in eDiscovery: Are We Ready for Watson?," at Q1 Production's eDiscovery for Financial Services Conference (New York, NY Feb. 7, 2012).
- 745. "Fundamentals of E-Discovery," with Jeremy R. Feinberg, Guest Lecture at Brian Donnelly's, Conrad Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Feb. 9, 2012).
- 746. "ESI in the Courts: What Happened in 2011 and Possible Changes in 2012 and Beyond," with Hon. John M. Facciola, Hon. Ronald J. Hedges, and Jeane A. Thomas, American Law Institute American Bar Association ("ALI-ABA") Quarterly Webinar (Feb. 16, 2012).
- 747. "What Is Electronic Discovery and Why Has It Become Such an Issue?," Columbia Law School's Society for Law, Science & Technology ("SLST") (New York, NY Mar. 6, 2012).
- 748. "Technology-Assisted Review in eDiscovery: Watson Meets Daubert?," WebEx Presentation at Tanina Rostain's and Roger Skalback's Georgetown University Law Center Technology, Innovation, and Law Practice Course (Mar. 14, 2012).
- 749. "Technology-Assisted Review in eDiscovery: Watson Meets Daubert?," Continuing Legal Education ("CLE") Program at Wachtell, Lipton, Rosen & Katz (New York, NY Mar. 15, 2012).
- 750. "The First Amendment Meets the Internet: Struggle Trying to Distinguish Wide-Open, Often Vitriolic, Commentary on the Internet," with Mark A. Berman, Andre A. Brochetelli, Lisa Cohen, Danielle M. DeFilippis, Richard H. Dolan, Herbert Eisenberg, Eugene Kublanovsky, Jack P. Levin, Josh Lipsman, Hon. Karla Moskowitz, Edward O'toole, Adam Pulver, Shawn J. Rabin, and Blair Russell, at the New York Inn of Court (New York, NY Mar. 21, 2012).
- 751. "Inadvertent Production and Loss of Privilege and Work Product Protection: What is Federal Rule of Evidence 502 and What Does It Do?," with Hon. Ronald J. Hedges, PLI Telephone Briefing on

- Technology, ESI, and You (Mar. 23, 2012).
- 752. "Electronically Stored Information in Matrimonial Cases," with Hon. Henry Nowak, at the New York State Judicial Institute's 2012 Matrimonial Seminar for New York State Matrimonial Court Judges and Court Attorneys (White Plains, NY Mar. 27, 2012).
- 753. "Ethics and E-Discovery Searches," with Bennett B. Borden, Thomas B. Mason, and Ellen ("Elle") Stefani Pyle, for the E-Discovery Committee of the Litigation Section of the Washington, DC Bar Association (Washington, DC Apr. 12, 2012).
- 754. "Ethics Game Show: E-Discovery Edition," with Hon. Timothy S. Driscoll, Jeremy R. Feinberg, Hon. James C. Francis, IV, Artemis Lekakis, and Hon. Frank Maas (New York, NY Apr. 20, 2012).
- 755. "Defense of Process: Best Practices and Guidelines," with Robert Arnold, Sherry Harris, Henry Kelston, and Hon. Craig B. Shaffer, at The Sedona Conference Working Group 1 Mid-Year Meeting (Denver, CO Apr. 26 & 27, 2012).
- 756. "Model Orders, Default Standards, and Pilot Projects, with Kevin F. Brady, Howard Feldman, Hon. Ronald J. Hedges, Hon. Elizabeth D. Laporte, Edward Reines, Jeffrey C. Sharer, and Ariana J. Tadler, at The Sedona Conference Working Group 1 Mid-Year Meeting (Denver, CO Apr. 27, 2012).
- 757. "An Overview of the E-Discovery Process for the Judges and Clerks of the New York State Commercial Division," with Jeremy R. Feinberg, Lunch Presentation to the New York State Unified Court System Commercial Division Judges and Clerks (New York, NY Apr. 30, 2012).
- 758. "Using Technology Assisted Review to Slash E-Discovery Costs: Opportunities, Challenges, and Ethical Considerations," with Gordon V. Cormack and Marc Wolinsky, at the 2012 Wachtell, Lipton, Rosen, and Katz Seminar New York (New York, NY May 2, 2012).
- 759. "Technology-Assisted Review in eDiscovery: Watson Meets Daubert?, "Continuing Legal Education ("CLE") Program at JPMorgan Chase (New York, NY May 3, 2012).
- 760. "Tools, Technology and Process: The Three Legged eDiscovery Stool," with Jay Leib, Patrick R. McColloch, and Susan R. Sparrow, IE Discovery's Annual Government Symposium (Washington, DC May 10, 2012).
- 761. "Legal Ethics in the Cloud," with Jeremy R. Feinberg, at Practicing Law Institute's ("PLI's") Cloud Computing 2012: Cut Through the Fluff and Tackle the Critical Stuff (New York, NY May 11, 2012).
- 762. "Practice Support Tools and the Rise of the Machine," with Marc Lauritsen, Kingsley Martin, and Derek Schueren at the Ark Group's Forum on Business Intelligence and Analytics for Law Firms (New York, NY May 17, 2012).
- 763. "Defending the Use of Technology-Assisted Review in eDiscovery: 'Watson Meets Daubert,'" with Jason R. Baron, Emily A. Cobb, Jerone J. English, and Raymond B. Kim, at the American Bar Association ("ABA") Litigation Section 6th National Institute on E-Discovery (New York, NY May 18, 2012).
- 764. "Managing ESI in Discovery: Identification, Collection, Review, and Production of ESI in Civil Litigation," with Hon. Ronald J. Hedges, Samantha J. Lofton, and Tania Mabrey, American Law Institute

- American Bar Association ("ALI-ABA") Webinar (May 30, 2012).
- 765. "The Ethics of Advocacy in the E-Discovery Sphere: What Does Competence, Candor, Fairness Require in Practice?," with Mark A. Berman, Julia Brickell, Hon. James C. Francis IV, and Hon. Andrew J. Peck, at E-Discovery: Best Practices & Ethical Implications, New York City Bar Center for CLE (New York, NY May 30, 2012).
- 766. "Avoiding Sanctions in the Expanding Digital Universe," with Andrew S. Baron, Hon. James C. Francis IV, Hon. Andrew J. Peck, and Sandra Rampersaud, at E-Discovery: Best Practices & Ethical Implications, New York City Bar Center for CLE (New York, NY May 30, 2012).
- 767. "Form of Production and Federal Rule of Evidence 502," Guest Lecturer at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC June 3, 2012).
- 768. "The Evolving Law on Search Techniques and Protocols," Distinguished Lecturer at Georgetown University Law Center's eDiscovery Training Academy (Washington DC, June 7, 2012).
- 769. "Technology-Assisted Review in eDiscovery: Watson Meets Daubert?," Continuing Legal Education ("CLE") Program at Genentech, Inc. (South San Francisco, CA June 11, 2012).
- 770. "Legal Ethics in the Cloud," with Jeremy R. Feinberg, at Practicing Law Institute's ("PLI's") Cloud Computing 2012: Cut Through the Fluff and Tackle the Critical Stuff Program (San Francisco, CA June 11, 2012).
- 771. "Expert Roundtable," with Ralph C. Losey, Matthew Nelson, Herbert L. Roitblat, Lisa Rosen, Jeffrey C. Sharer, and Tomas M. Thompson, at the Seventh Circuit Pilot Project Computer-Assisted Review Workshop: Mock Meet-and-Confer & Hearing and Roundtable Discussion with Industry Experts (Chicago, IL, June 14, 2012).
- 772. "Ethics and Risk Management for Privacy Professionals," at Practicing Law Institute's ("PLI's") Thirteenth Annual Institute on Privacy and Security Law (New York, NY June 18, 2010).
- 773. "Electronically Stored Information in Matrimonial and Family Court Cases," Master's Class Sponsored by the New York City Family Court Judges Association (New York, NY June 19, 2012; Judge Ilana Gruebel; NYU Law School Vanderbilt Hall).
- 774. "Ethical Issues in E-Discovery and Cloud Computing," Master's Seminar on Ethics at the 2012 Annual Florida Bar Convention (Kissimmee, FL June 22, 2012).
- 775. "E-Discovery, Litigation Holds, and Metadata," with Steven C. Bennett and James S. Zucker, Rossdale Continuing Legal Education ("CLE") Webinar (June 27, 2012).
- 776. "Government Investigations and Demands for ESI What's a Corporation to Do?," with Hon. Ronald J. Hedges and David C. Shonka, Practicing Law Institute ("PLI") Telephone Briefing on Technology, ESI, and You, (June 29, 2012).
- 777. "Demystifying Predictive Coding: Using Technology to Reduce Review Costs," with Sean O'Grady and Carmen Oveissi Field, Deloitte Insights Video Podcast (New York, NY July 13, 2012).

- 778. "The Digital Frontier: Truth Versus Privacy," at the 75th Annual Summer Conference of the National Council of Juvenile and Family Court Judges (New Orleans, LA July 16, 2012).
- 779. "Changing World of ESI & E-Discovery: Summer 2012 Update," with Hon. Ronald J. Hedges, Hon. Elizabeth D. Laporte, and Jeane A. Thomas, American Law Institute Continuing Legal Education ("ALI CLE") Quarterly Webinar (July 18, 2012).
- 780. "The Who, the What and the How of Technology Assisted Review," with Jason Lichter, David S. Leone, and Brendan M. Schulman, The Cowen Group Leadership Breakfast (New York, NY July 19, 2012).
- 781. "Predictive Coding and Validation," with Bennett B. Borden, Thomas C. Gricks III, David D. Lewis, Herbert Roitblat, and Karl Schieneman, at the Carmel Valley eDiscovery Retreat (Carmel, CA July 24, 2012).
- 782. "Current Issues in E-Discovery," with Robert B. Fitzpatrick, Hon. Elizabeth D. Laporte, Hon. Matthew F. Kennelly, Hon. Rebecca R. Pallmeyer, and Hon. Craig B. Shaffer, at the 19th Annual American Law Institute Continuing Legal Education ("ALI CLE") Current Developments in Employment Law (Santa Fe, NM July 26, 2012).
- 783. "Social Media Developments," with Robert B. Fitzpatrick, Hon. Elizabeth D. Laporte, Hon. Matthew F. Kennelly, and Hon. Craig B. Shaffer, at the 19th Annual American Law Institute Continuing Legal Education ("ALI CLE") Current Developments in Employment Law (Santa Fe, NM July 27, 2012).
- 784. "Can Computers Do It Better, Faster, and Cheaper—A Discussion of Predictive Coding," with Hon. Andrew J. Peck, Jeffrey C. Sharer, Sonya Sigler, and Martin T. Tully, at the American Bar Association ("ABA") Section of Science and Technology e-Discovery and Digital Evidence ("EDDE") Committee Meeting (Chicago, IL Aug. 1, 2012).
- 785. "Attorney-Client Privilege Reviews and Inadvertent Disclosures: Conducting a Privilege Review and Leveraging FRE 502 and Clawback Agreements to Maintain Privileged Communication and Protect Work Product," with Jennifer F. Bettrami and Sarah Gillett, Strafford Publications Webinar (Sept. 11, 2012).
- 786. "Defense of Process," with Donald C. Ramsay, Michael E. Moskovitz, and Brendan M. Schulman, at The Sedona Conference Working Group on Electronic Document Retention and Production 2012 Annual Meeting (Atlanta, GA Sept. 13, 2012).
- 787. "Proposed Amendments to the Federal Rules," with William P. Butterfield, Conor R. Crowley, Steven S. Gensler, and John J. Rosenthal, at The Sedona Conference Working Group on Electronic Document Retention and Production 2012 Annual Meeting (Atlanta, GA Sept. 13, 2012).
- 788. "E-Discovery Case Law Update II: The TAR Cases," with Kenneth J. Withers, at The Sedona Conference Working Group on Electronic Document Retention and Production 2012 Annual Meeting (Atlanta, GA Sept. 13, 2012).
- 789. "Search," with Amor A. Esteban and Hon. David J. Waxse, at the 2012 E-Discovery Seminar for Federal Judges (Baltimore, MD Sept. 19, 2012).
- 790. "Local Initiatives," with Hon. Ronald J. Hedges and Kenneth J. Withers at the 2012 E-Discovery Seminar for Federal Judges (Baltimore, MD Sept. 20, 2012).

- 791. "Working Smarter, Working Faster, Working Cheaper: What Does Predictive Coding Really Mean For Your Business and How Can You Harness It?," with Mark Kindy, Michael Klein, Patrick Oot, and Hon. Andrew J. Peck, at the Information Governance and eDiscovery Strategy Exchange (Washington, DC Sept. 21, 2012).
- 792. "The Role of Transparency and Cooperation in Technology-Assisted Review," "Think Tank 3" at the Information Governance and eDiscovery Strategy Exchange (Washington, DC Sept. 21, 2012).
- 793. "Hot Topics in eDiscovery: Defensibility in eDiscovery," with Thomas Y. Allman and Anne S. Jordan at PLI's 2012 E-Discovery Conference (New York, NY Sept. 24, 2012).
- 794. "Okay, I'm Sold on Technology-Assisted Review Now What?," with Gordon V. Cormack and Conor R. Crowley, Bloomberg BNA Webinar (Sept. 25, 2012).
- 795. "Determining the Scope of Preservation," with Michael Arkfeld, Denise Talbert, and Mark Tamburri, Legal Hold Pro 2012 Conference on Preservation Excellence (Portland, OR Sept. 27, 2012).
- 796. "The Changing Technology Landscape," with Michael Arkfeld and Hon. Ronald J. Hedges, Legal Hold Pro 2012 Conference on Preservation Excellence (Portland, OR Sept. 28, 2012).
- 797. "Where Do We Go From Here?," with Hon. Ronald J. Hedges, Jeane Thomas, and Paul Weiner, Legal Hold Pro 2012 Conference on Preservation Excellence (Portland, OR Sept. 28, 2012).
- 798. "Fundamentals of E-Discovery," with Jeremy R. Feinberg, Guest Lecture at Brian Donnelly's, Conrad Johnson's, and Mary Marsh Zulack's Lawyering in the Digital Age Clinic Course at Columbia Law School (New York, NY Oct. 1, 2012).
- 799. "Rule 502 Symposium," Advisory Committee on Evidence Rules (Charleston, SC Oct. 5, 2012).
- 800. "The Evolving Practice and Case Law on Search: Technology-Assisted Review," Presentation to the Committee on Professional Ethics of the Association of the Bar of the City of New York (Oct. 11, 2012).
- 801. "A Practitioner's Guide to Statistical Sampling in eDiscovery," with Gordon V. Cormack, Maureen O'Neill, and Jim Wagner, DiscoverReady Webinar (Oct. 16, 2012).
- 802. "Fundamentals of Electronic Discovery for New Associates," with Luis A. McNish, Wachtell, Lipton, Rosen & Katz New Associate Training (New York, NY Oct. 16, 2012).
- 803. "Technology-Assisted Review': What It is, How It Works, and Why You Should Care," at Columbia Law School's Society for Law, Science & Technology ("SLST") (New York, NY Oct. 18, 2012).
- 804. "E-Discovery: Where Are We? What's to Come?," with Stephen Y. Chow, Hon. Robert B. Collings, Martha A. Mazzone, and Kenneth J. Withers, Bench and Bar Conference of the United States District Court for the District of Massachusetts: Changing Landscapes in Law, Legal Practice and Beyond (Newton, MA Oct. 19, 2012).
- 805. "Ethics and the Use of Technology: 'Technology-Assisted Review' as an Example of a New Technology," Guest Lecturer at Jeremy R. Feinberg's Professional Responsibility Course at Columbia Law School (New York, NY Oct. 22, 2012).

- 806. "Ethical Issues in E-Discovery, Social Media and the Cloud," with Hon. Ronald J. Hedges, Rutgers Law and Technology Law Journal Symposium (Newark, NJ Oct. 23, 2012).
- 807. "Asking the Right Questions: The Challenge of Big Data," with V. Mary Abraham, Chad C. Ergun, and Joshua Fireman, at Ark Group's Eighth Annual Knowledge Management in the Legal Profession Conference (New York, NY Oct. 25, 2012).
- 808. "Ethical Issues in Litigation: Ethics and the Internet—Social Media and Cloud Computing," with Hon. Charles E. Bullock, Michael L. Doane, and Douglas R. Nemee, at the American Intellectual Property Law Association ("AIPLA") Annual Conference (Washington, DC Oct. 26, 2012).
- 809. "Technology-Assisted Review': What It Is, How It Works, and Why You should Care," Guest Lecturer at Craig Ball's eDiscovery Course at the University of Texas at Austin School of Law (Austin, TX Oct. 29, 2012).
- 810. "Technology-Assisted Review': Evolving Case Law and Practice," American Bar Association ("ABA") Section of Science and Technology e-Discovery and Digital Evidence ("EDDE") eMeeting / WebEx (Nov. 1, 2012).
- 811. "Ethics and Professionalism: Social Media and Cloud Computing," at the State Bar of Georgia (Atlanta, GA Nov. 2, 2012).
- 812. "Technology-Assisted Review: Evolving Case Law and Practice," with Gordon V. Cormack, Practicing Law Institute ("PLI") Telephone Briefing on Technology, ESI, and You (Nov. 12, 2012).
- 813. "Some Thoughts on Technology-Assisted Review," Guest Lecturer at John M. Barkett's E-Discovery Course at the University of Miami Law School (Miami, FL Nov. 13, 2012).
- 814. "'Predictive Coding': What Is It, How Does It Work, and Why Should You Use It?," at the 11th Annual Energy Litigation Conference, Institute for Energy Law of The Center for American and International Law, American Bar Association ("ABA") Section of Environment, Energy and Resources, and ABA Energy Litigation Committee of the Section of Litigation (Houston, TX Nov. 15, 2012).
- 815. "The Ethics of Technology-Assisted Review," with John M. Barkett and Kenneth J. Withers, ABA Webinar (Nov. 20, 2012).
- 816. "Plain Talk on Technology-Assisted Review," with Craig Ball, American Law Institute ("ALI") Continuing Legal Education ("CLE") Program (Dec. 5, 2012).
- 817. "Measuring, Validating, and Defending Your Technology-Assisted Review: What Metrics and Measurements are Necessary or Appropriate?," with Herbert L. Roitblat, David D. Lewis, Ian Soboroff, and Ian Wilson, Georgetown Advanced E-Discovery Institute (Ritz-Carlton, Tyson's Corner, VA Dec. 6, 2012).
- 818. "Technology-Assisted Review: Evolving Case Law and Practice," at the New Jersey Chapter of Women in eDiscovery (Parsippany, NJ Dec. 11, 2012).
- 819. "2012 eDiscovery Case Law Review: The 3 Ps for 2013," with Scott Giordano, Hon. Ronald J. Hedges, and Jeane A. Thomas, Exterro Webinar (Dec. 12, 2012).

- 820. "Technology-Assisted Review: Evolving Case Law and Practice," with Gordon V. Cormack, Videotaping at the New York State Judicial Institute (White Plains, NY Dec. 13, 2012).
- 821. "Technology-Assisted Review: Evolving Case Law and Practice," with Michael Dalewitz, at the New York Metropolitan Area Chapter of the Association of Litigation Support Professional ("ALSP") (New York, NY Dec. 20, 2012).

- 822. "Fundamentals of E-Discovery," for the Federal Practice Committee of the United States District Court for the District of Nebraska (Lincoln and Omaha, NE Jan. 7, 2010).
- 823. "Electronic Data in Litigation: Trends and Developments (ESI Quarterly Winter 2011)," with Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association (ALI-ABA) Audio Webcast Program (Jan. 12, 2010).
- 824. "Ethics in the Electronic Age: Be Careful When Using That Cell Phone, Blackberry, Blog, Social Network," with Jeremy R. Feinberg, David A. Lewis, and Alan Winchester, at the Association of the Bar of the City of New York (New York, NY Jan. 20, 2011).
- 825. "Potential Minefields and Dispute Resolution Strategies for E-Discovery in Arbitration," Webcast for West Professional Development, a Thompson Reuters Business (Jan. 25, 2011).
- 826. "Statistical Sampling for Dummies: Applying Measurement Techniques in eDiscovery," LDM Global Webinar with Gordon V. Cormack and Scott W. Merrick (Jan. 27, 2011).
- 827. "Next Decade of Document Review: Cheaper, Better, Smarter," with Beth A. Koehler, Hon. Andrew J. Peck, Christopher D. Wall, and John M. Wilan, Kroll Ontrack Litigation Technologies Workshop at LegalTech New York (New York, NY Feb. 1, 2011).
- 828. "Introduction to ESI Search," with Gene Eames, Sam McCollum, and Rudy Rouhana, Daegis Panel at LegalTech New York (New York, NY Feb. 2, 2011).
- 829. "Topics in Data Analytics and Legal Search," with Gene Eames, Anne Marie Gibbs, and Doug Stewart, Daegis Panel at LegalTech New York (New York, NY Feb. 2, 2011).
- 830. "Form of Production, Privilege, Federal Rule of Evidence 502, and Ethics" Guest Lecturer with Hon. John M. Facciola, at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC Feb. 5, 2011).
- 831. "Some Things You Should Know About E-Discovery," Wachtell, Lipton, Rosen & Katz Continuing Legal Education ("CLE") Program (New York, NY Feb. 9, 2011).
- 832. "Some Things You Should Know About E-Discovery," Guest Lecturer with Jeremy R. Feinberg, at Brian Donnelly's, Conrad Johnson's and Mary Zulack's Columbia Law School Digital Law Clinic Course (New York, NY Feb. 10, 2011).
- 833. "Sampling for eDiscovery Made Easy," with Prof. Gordon V. Cormack, Bureau of National Affairs ("BNA") Webinar (Feb. 15, 2011).

- Wilsing the Cloud to Deliver Legal Process Outsourcing: Risks and Ethical Considerations," with Paul J.R. Roy, at the International Quality and Productivity Center ("IQPC") Legal Process Outsourcing Summit (Feb. 16, 2011 New York, NY).
- 835. "Practitioners' Update," with Joseph M. Burton, Prof. Richard L. Marcus, Michael J. McGuire, Steven Teppler, and Lucy Thompson, at the Second Annual Electronic Discovery and Digital Evidence Practitioners' Workshop, sponsored by the American Bar Association's ("ABA's") Section of Science & Technology Law e-Discovery and Digital Evidence ("EDDE") Committee (San Francisco, CA Feb 18, 2011).
- 836. "Search: Trends, Myths, and Reality," with Prof. Gordon V. Cormack and Bruce Hedin, at the Second Annual Electronic Discovery and Digital Evidence Practitioners' Workshop, sponsored by the American Bar Association's ("ABA's") Section of Science & Technology Law e-Discovery and Digital Evidence ("EDDE") Committee (San Francisco, CA Feb. 18, 2011).
- 837. "Ethics Panel," with Hon. Gail A. Andler, Hon. John M. Facciola, Prof. Geoffrey C. Hazard, Hon. Frank Maas, and Hon. Andrew J. Peck, at the Second Annual Electronic Discovery and Digital Evidence Practitioners' Workshop, sponsored by the American Bar Association's ("ABA's") Section of Science & Technology Law e-Discovery and Digital Evidence ("EDDE") Committee (San Francisco, CA Feb. 19, 2011).
- 838. "Advanced Search Techniques in E-Discovery," Training Program for Wachtell, Lipton, Rosen & Katz's Automated Legal Support Department Managers (New York, NY Feb. 22, 2011).
- 839. "Taming the ESI Beast: Judicial Management and Other Strategies to Lower Costs and Expedite Cases," with Kenneth J. Withers, at the Annual Judges' Retreat of the U.S. District Court for the Western District of Missouri (Kansas City, MO Feb. 25, 2011).
- 840. "Test Your Ethics 2011: A Discussion of Real Word Ethical Issues," with Jeremy R. Feinberg, Thaddeus Hackworth, John Vagelatos, and Sara Walshe, for New York Corporation Counsel (Brooklyn, NY Feb. 28, 2011).
- 841. "Technology-Assisted Review Can be More Effective and More Efficient Than Exhaustive Manual Review," Richmond Journal of Law and Technology Symposium on "Shooting Fish in a Bottomless Barrel: Electronic Discovery in a World of Cloud Computing, Data Hoarding and Social Networking" (Richmond, VA Mar. 3, 2011).
- 842. "Pension Committee Revisited," with Chris Bright, Brad Harris, and Ronald J. Hedges, Legal Hold Pro Webinar (Mar. 4, 2011).
- 843. "Caselaw and Rules Update," with Kathryn Burkett Dickson, Hon. Luisa S. Porter, Hon. Carl J. West, and Kenneth J. Withers The 5th Annual Sedona Conference Institute Program on Staying Ahead of the eDiscovery Curve: Strategies to Reduce Costs and Meet Judicial Expectations (San Diego, CA Mar. 17, 2011).
- 844. "Proportionality in Preservation & Discovery," with Hon. Gail A. Andler, Paul E. Burns, Jerone J. English, Hon. Elizabeth D. Laporte, Jonathan M. Redgrave, and Joseph R. Saveri, at The 5th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Strategies to Reduce Costs and Meet Judicial Expectations (San Diego, CA Mar. 17, 2011).

- 845. "Cooperation Guidance for In-House Counsel & Litigators," with Jerone J. English, Cecil A. Lynn, Hon. Louisa S. Porter, Joseph R. Saveri, Hon Carl J. West, and Kenneth J. Withers, at The 5th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Strategies to Reduce Costs and Meet Judicial Expectations (San Diego, CA Mar. 17, 2011).
- 846. "Ethical Obligations & Issues in eDiscovery," with Jason R. Baron, Laura Buckland, Hon. Elizabeth D. Laporte, and Patrick L. Oot, at The 5th Annual Sedona Conference Institute ("TSCI") Program on Staying Ahead of the eDiscovery Curve: Strategies to Reduce Costs and Meet Judicial Expectations (San Diego, CA Mar. 17, 2011).
- 847. "Electronic Discovery," with Yalkin Demirkaya, Hon. James P. Flanagan, Sal Llannera, and Hon. Emily Pines, at the Suffolk County Bar Association / Suffolk Academy of Law (Hauppauge, NY Mar. 23, 2011).
- 848. "Fundamentals of E-Discovery and Social Media," CLE Program for the Law Clerks and Court Attorneys of the New York State Court of Claims (Saratoga Springs, NY Mar. 30, 2011).
- 849. "The Top Ten (or So) E-Discovery Predictions for 2011," with Ronald J. Hedges, The Association of Litigation Support Professionals (ALSP) Webinar (Mar. 31, 2011).
- 850. "The Ethics Game Show: E-Discovery Edition 2011," with Jeremy R. Feinberg, Hon. James C. Francis IV, Hon. Frank Maas, and Allison J. Schoenthal, at Practicing Law Institute ("PLI") (New York, NY Apr. 1, 2011).
- 851. Presentation on Search & TREC, with Jason R. Baron, at the Richard K. Herrmann Technology Inn of Court (Wilmington, DE Apr. 11, 2011).
- 852. "The Electronic Age: How Courts are Dealing with Major Issues," (ESI Quarterly Spring 2011)," with Hon. Paul W. Grimm, Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (Apr. 13, 2011).
- 853. "Technology-Assisted Review Can be More Effective and More Efficient Than Exhaustive Manual Review," at the Educating the Digital Lawyer Workshop at Columbia Law School (New York, NY Apr. 14, 2011).
- 854. "Rule 45 Subpoenas and Non-Party Production Issues in Electronic Discovery: Assessing the Burdens and Costs and Avoiding the Pitfalls," with Anne Marie Gibbs and Babette V.E. Orenstein, Lorman Education Services Teleconference (Apr. 15, 2011).
- 855. "Ethics in the Electronic Age: How to Avoid Pitfalls When Using Your Gadgets," Continuing Legal Education ("CLE") Program for the New York Appellate Division Second Department, with Jeremy R. Feinberg, David A. Lewis, and Alan Winchester (Brooklyn, NY Weds. Apr. 20, 2011).
- 856. "Statistical Sampling for Dummies: Applying Measurement Techniques in eDiscovery," with Gordon V. Cormack, The Association of Litigation Support Professionals ("ALSP") Webinar (Apr. 21, 2011).
- 857. "The Sedona Principles, 3rd Edition, Principle 14: Sanctions & Preservation," with Kevin F. Brady, William P. Butterfield, Conor R. Crowley, and John Luken, at The Sedona Conference Working Group on Electronic Document Retention & Production 2011 Mid-Year Meeting (Ft. Lauderdale, FL Apr. 28, 2011).

- 858. "Electronic Discovery Presentation for the Appellate Division First Department's Law Clerks, Court Attorneys, and Staff," with Mark Berman and James G. Ryan (New York, NY May 2, 2011).
- 859. "E-Discovery in the State Courts: Case Law and Rules Developments," with Thomas Y. Allman, Hon. Ralph Artigliere, and Hon. Donald F. Parsons, Jr., and Kenneth J. Withers, Sedona Conference Webinar (May 3, 2011).
- 860. "Practical Considerations In Approaching Electronic Discovery," with Sean Broderick, Andrew D. Goldsmith, and Hon. Peggy A. Leen, at the Annual District Court Training for the District of Nevada (Las Vegas, NV May 5, 2011).
- 861. "Balancing Privacy and Public Interest in the 'Electronic Age': Is There a Balance? Are There Irreconcilable Differences?," with Karen Eltis, Natalie Gomez-Velez, and Stephen Schultze, at the Princeton University Center for Information Technology Policy's Conference on "Privacy, Access and Technology and the Future of Litigation in the United States" (Princeton, NJ May 13, 2011).
- 862. "Cutting-Edge Search & Document Review: A Brave New World of Automation?," with Jason R. Baron, Monica McCarroll, and Howard J.C. Nicols, at the American Bar Association Section on Litigation's Fifth Annual National Institute on E-Discovery: Practical Solutions for Dealing with Electronically Stored Information (ESI)" (Washington, DC May 19, 2011).
- 863. "New Frontiers in E-Discovery and the Government Lawyer," with Chris May, David Shonka, and Terry Sweeney, at IE Discovery's Fourth Annual Electronic Discovery Symposium for Governmental Agencies (Washington, DC May 19, 2011).
- 864. "Can Technology Beat Humans at Document Review?," with Gordon V. Cormack, Bureau of National Affairs ("BNA") Webinar (May 26, 2011).
- 865. "Inconsistent Assessment of Responsiveness in E-Discovery: Difference of Opinion or Human Error?," with Gordon V. Cormack, Workshop on Setting Standards for Searching Electronically Stored Information in Discovery Proceedings ("DESI-IV"), at the 13th International Conference on Artificial Intelligence and the Law ("ICAIL 2011") (Pittsburgh, PA June 6, 2011).
- 866. "How to Conduct a Better Search . . . The Specifics," with Jason R. Baron and Jennifer Kneadle Mason, at The Western Pennsylvania Chapter of the Federal Bar Association's ("FBA's") "School's NOT Out for the Summer: The 2011 FBA E-Discovery Summer Series" (Pittsburgh, PA June 7, 2011).
- 867. "The Evolving Law on Search Techniques & Protocols," with Jason R. Baron, at the Georgetown Law Center's eDiscovery Training Academy (Washington, DC June 9, 2011).
- 868. "Form of Production, Accessible / Not Reasonably Accessible ESI, Cost Sharing / Shifting, Privilege and Federal Rule of Evidence 502, and Ethics." Guest Lecturer at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC June 12, 2011).
- 869. "Overview of Electronic Discovery: An Update on New York State Case Law and Developments," with Mark A. Berman, James G. Ryan, and Alan M. Winchester, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (June. 14, 2011).

- 870. "Government Investigations: E-Discovery Nuts, Bolts, and Defensible Search Strategies—New Developments and Critical Considerations," with Lisa Habbeshaw and Hon. Ronald J. Hedges, District of Columbia Federal Bar Association Webinar (June 15, 2011).
- 871. "The Latest in Search Trends for Litigators & In-House Counsel," with Jason R. Baron, Gordon V. Cormack, and Hon. Frank Maas, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (June 16, 2011).
- 872. "Should I Friend the Judge and Other Current Ethical Challenges for Lawyers," at Practicing Law Institute's ("PLI's") Twelfth Annual Institute on Privacy and Security Law (New York, NY, June 21, 2011).
- 873. "Form of Production," with Conor R. Crowley and Hon. James C. Francis IV, at the Federal Judicial Center's E-Discovery Seminar for Federal Judges (Charleston, SC June 29, 2011).
- 874. "Search Techniques," with Kenneth J. Withers, at the Federal Judicial Center's E-Discovery Seminar for Federal Judges (Charleston, SC June 30, 2011).
- 875. "Rule 502, Privilege & Work Product," with Hon. John M. Facciola and Kenneth J. Withers, at the Federal Judicial Center's E-Discovery Seminar for Federal Judges (Charleston, SC June 30, 2011).
- 876. "Studies on Human Versus Technology-Assisted Review in E-Discovery," with Gordon V. Cormack and Karl Schieneman, ESIBytes Podcast (July 7, 2011).
- 877. "Fundamentals of E-Discovery for New York State Unified Court System," with Jeremy R. Feinberg, Videocast Program for the New York State Unified Court System (New York, NY July 26, 2011).
- 878. "This Really Happened: A Review of Real World Ethical Issues 2011," with Hon. Sheila Abdus-Salaam, Jeremy R. Feinberg, Artemis Letakis, and Elizabeth Rotenberg-Schwartz, at Practicing Law Institute ("PLI") (New York, NY July 27, 2011).
- 879. "Back to Basics: A Technical Primer on E-Discovery," with Jake Frazier, Hon. Andrew J. Peck, and Annette ("Toni") Tomarazzo, Federal Bar Council (New York, NY Aug. 3, 2011)
- 880. "eDiscovery Outlook: Is Technology-Assisted Review Supporting Attorneys or Replacing Them?," with Gordon V. Cormack, Mary Mack, and Johannes C. Scholtes, Zylab Webinar (Aug. 4, 2011).
- 881. "Emerging Trends in Search & Document Review: Are We Ready for Watson?," with Bennett B. Borden and Gordon V. Cormack, and Hon. Frank Maas, at the Third Electronic Discovery and Digital Evidence Practitioners' Workshop, sponsored by the American Law Institute / American Bar Association Section of Science & Technology Law ("ALI-ABA") (New York, NY Aug. 15, 2011).
- 882. "Early Case Assessment: How to Get the Information You Need and What To Do With it When You Get It," with Deborah Baron, Deborah R. Bernard, Heather Hughes, Emily Stapf, and Steven Teppler, at the Third Electronic Discovery and Digital Evidence Practitioner' Workshop, sponsored by the American Law Institute / American Bar Association Section of Science & Technology Law ("ALI-ABA") (New York, NY Aug. 15, 2011).
- 883. "E-Discovery and Ethics," with Jeremy R. Feinberg, Hon. Frank Maas, and Hon. Karla Spaulding, at the Third Electronic Discovery and Digital Evidence Practitioners' Workshop, sponsored by the American

- Law Institute / American Bar Association Section of Science & Technology Law ("ALI-ABA") (New York, NY Aug. 16, 2011).
- 884. Federal Civil Rules Committee Mini-Conference (Dallas/Fort Worth, TX Sept. 9, 2011).
- 885. "Fundamentals of Electronic Discovery for New Associates," with Luis A. McNish, Wachtell, Lipton, Rosen & Katz CLE Program (New York, NY Sept. 14, 2011).
- 886. "Predictive Coding—Overcoming Barriers to Entry," with Keith Bernstein, Anne Kershaw, Aaron Laliberte, and Dawn Johnson, The Association of Litigation Support Professionals ("ALSP") (Boston, MA Sept. 15, 2011).
- 887. "The Challenges of New Media: Facebook, Twitter, the Cloud, and Beyond....," with Thomas Y. Allman and Hon. Ronald J. Hedges, Practicing law Institute's ("PLI's") Electronic Discovery Guidance 2011: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 19, 2011).
- 888. "Understanding and Managing Risks in Cross-Border eDiscovery," at the September Meeting of the New Jersey Chapter of Women in E-Discovery (Parsippany, NJ Sept. 20, 2011).
- 889. "Cross-Border E-Discovery: Meeting the Challenges and Mitigating the Risks," with Richard Kershaw, Catalyst Webinar (Sept. 21, 2011).
- 890. "Session 3: Dealing with the Challenges of Legal Holds: Pension Committee, Rimkus & Progeny," with James Daley, Michael Moore, and Tom O'Connor, at Executive Counsel Institute's E-Discovery for the Corporate Market Conference: "The Exchange" (Houston, TX Sept 22, 2011).
- 891. "Session 6: Effective Cost and Risk Containment Steps to Achieve Proportionality," with James Daley, John Schwab, and Paul Weiner, at Executive Counsel Institutes' E-Discovery for the Corporate market Conference: "The Exchange" (Houston, TX Sept 22, 2011).
- 892. "The Future of E-Discovery: Top Ten Trends and Predictions," with Hon. Ronald J. Hedges and Chuck Pindell, Legal Service Providers Association ("LSPA") Webinar sponsored by iCONNECT Development, LLC (Sept. 28, 2011).
- 893. "Some Things You Should Know About E-Discovery," Guest Lecturer with Jeremy R. Feinberg, at Brian Donnelly's, Conrad Johnson's and Mary Zulack's Columbia Law School Digital Law Clinic Course (New York, NY Oct. 3, 2011).
- 894. "Fundamentals of Electronic Discovery for New Associates," with Luis A. McNish, Wachtell, Lipton, Rosen & Katz CLE Program (New York, NY Oct. 4, 2011).
- 895. "Women Thought Leader Panel: E-Discovery Today, Tomorrow and in the Far Away Future," with Michelle Briggs-Treadwell, Alitia Faccone, Caitlin Murphy, Allison Stanton, and Susan V. Watson, at the Masters Conference (Washington, DC Oct. 4, 2011).
- 896. "Search and Retrieval: 2011 Update," with Jason R. Baron and Ashish S. Prasad, at The Sedona Conference Annual Meeting (Austin, TX Oct. 7, 2011).

- 897. "Sampling: An eDiscovery Primer," with Chris May, IE Discovery Seminar for Government Attorneys (Chevy Chase, MD Oct. 12, 2011).
- 898. "E-Discovery Search Tools and Techniques for RIM Professionals," with Chris May, at the 2011 ARMA International Conference & Expo (Washington, DC Oct, 19, 2011).
- 899. "International Considerations for E-Discovery", with Hampton Coley and Theresa L. Widmann, at the October Meeting of the New York City Chapter of Women in E-Discovery (New York, NY Oct. 20, 2011).
- 900. "eDiscovery in Transition: New Trends and FRCP Amendments on the Horizon," with Hon. John M. Facciola, Hon. Ronald J. Hedges, and Jeane A. Thomas, ESI Quarterly Fall 2011, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (Oct. 25, 2011).
- 901. "E-Discovery, Litigation Holds & Metadata Best Practices," with Steven C. Bennett and Michael E. Lackey, Rossdale Continuing Legal Education ("CLE") Webinar (Oct. 26, 2011).
- 902. "Disruptive Technologies / Innovative Thinking," with Richard S. Granat, Marc Lauritsen, and Kingsley Martin, at the 2011 Futures Conference & Annual Meeting of the College of Law Practice Management (Chicago, IL Oct. 28, 2011).
- 903. "Ethics and the Use of Technology," Guest Lecturer at Jeremy R. Feinberg's Professional Responsibility Course at Columbia Law School (New York, NY Oct. 31, 2011).
- 904. "Sampling: An eDiscovery Primer," with Chris May, IE Discovery Seminar Webinar (Nov. 2, 2011).
- 905. "European Cross-Border Data Protection," Luncheon Sponsored by H7b1, LexisNexis, IPRO TECH, and Equivio (New York, NY Nov. 9, 2011).
- 906. "Defensible Document Review Using Advanced Technology," with Daniel K. Gelb, Thomas Shields, Thomas Svoboda, and Kenneth J. Withers, The Sedona Conference "Voices From the Desert" Webinar (Nov. 10, 2011).
- 907. "The Lawyer's Perspective," at the NSF IIS Program E-Discovery Grant Advisory Board Meeting at the University of Maryland (College Park, MD Nov. 14, 2011).
- 908. "TREC 2011 Legal Track Overview," with Gordon V. Cormack, at the TREC 2011 Legal Track Workshop (Gaithersburg, MD Nov. 15, 2011).
- 909. "Defending the Use of Analytical Software in Civil Discovery," with Conor R. Crowley, Laura Kibbe, Hon. Elizabeth D. Laporte, and Howard J.C. Nicols, at the Georgetown University Law Center 2011 Advanced E-Discovery Institute (Crystal City, VA Nov. 18, 2011).
- 910. "The Challenges of New Media: Facebook, Twitter, the Cloud, and Beyond....," with David E. Garrett and Hon. Ronald J. Hedges, Practicing law Institute's ("PLI's") Electronic Discovery Guidance 2011: What Corporate and Outside Counsel Need to Know (San Francisco, CA Dec. 2, 2011).
- 911. "E-Discovery in Matrimonial Cases," With Hon. John M. Curran and Hon. Henry J. Nowak, at the Bar Association of Erie County (Buffalo, NY Dec. 12, 2011).

- 912. "Ethics in the Electronic Age for New York State Court Attorneys," with Jeremy R. Feinberg, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (White Plains, NY Jan. 11, 2010).
- 913. "Ethics in the Electronic Age for New York State Court Attorneys," with Jeremy R. Feinberg, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (White Plains, NY Jan. 14, 2010).
- 914. "E-Discovery Lunch and Learn I," for the Automated Legal Support (ALS) Department at Wachtell, Lipton, Rosen & Katz (New York, NY Jan. 15, 2010).
- 915. "Searching for ESI in All the Wrong Places: What Every Lawyer Needs to Know About Using Search Tools in E-Discovery," with Terry Sweeney, IE Discovery Webcast (Jan. 20, 2010).
- 916. "E-Discovery Ethics," with Hon. John L. Carroll, William ("Bill") F. Hamilton, and Kenneth J. Withers, The Sedona Conference Voices From the Desert Webinar Series (Jan. 20, 2010).
- 917. "Ethics in the Electronic Age: Be Careful When Using That Cell Phone, Blackberry, Blog, Social Network...," with Melissa A. Crane, Jeremy R. Feinberg, David A. Lewis, and Hon. Jacqueline W. Silbermann, at the Association of the Bar of the City of New York (New York, NY Jan 21, 2010).
- 918. "Issue Area 1: Preservation," with Matthew Cohen, M. James Daley, and Jonathan M. Redgrave, at The Sedona Conference Training Program on eDiscovery Dispute Resolution for Special Masters and Mediators, presented in association with the Academy of Court-Appointed Masters (ACAM) (Phoenix, AZ Jan. 28, 2010).
- 919. "Issue Area 4: Search Terms & Methodology," with Matthew Cohen, M. James Daley, John H. Jessen, and Timothy L. Moorehead, at The Sedona Conference Training Program on eDiscovery Dispute Resolution for Special Masters and Mediators, presented in association with the Academy of Court-Appointed Masters ("ACAM"), (Phoenix, AZ Jan. 28, 2010).
- 920. "Issue Area 6: Privilege," with Hon. John M. Facciola, Jonathan M. Redgrave, and Hon. Shira A. Scheindlin, at The Sedona Conference Training Program on eDiscovery Dispute Resolution for Special Masters and Mediators, presented in association with the Academy of Court-Appointed Masters ("ACAM") (Phoenix, AZ Jan. 29, 2010).
- 921. "EU Data Protection Rules and Their Practical Implementation: How do Corporations Respond to US Litigation and Regulatory Matters Involving Data Held in the EU Without Running Afoul of the Rules? Part I," with Chris Dale, Browning E. Marean III, Nigel Murray, Vince Neicho, Hon. Andrew J. Peck, George I. Rudoy, and Senior Master Steven Whitaker, panel sponsored by Trilantic at LegalTech New York 2010 (New York, NY Feb. 1, 2010).
- 922. "EU Data Protection Rules and Their Practical Implementation: How do Corporations Respond to US Litigation and Regulatory Matters Involving Data Held in the EU Without Running Afoul of the Rules? Part II," with Chris Dale, Browning E. Marean III, Nigel Murray, Vince Neicho, Hon. Andrew J. Peck, George I. Rudoy, and Senior Master Steven Whitaker, panel sponsored by Trilantic at LegalTech New York 2010 (New York, NY Feb. 1, 2010).

- 923. "Shifts in Legal Paradigms: Towards Defensible Search and Review," with Claudia M. Cohen, Jennifer R. Martin, and Hon. Andrew J. Peck, panel sponsored by Stroz Friedberg at LegalTech New York 2010 (New York NY Feb. 2, 2010).
- 924. "What Keeps Me Up at Night and What Drives Me Crazy About E-Discovery," with Shawnna Childress, Hon. Katharine Sweeney Hayden, Carmen Oveissi Field, and Babette V.E. Orenstein, panel sponsored by Women in eDiscovery at LegalTech New York 2010 (New York NY Feb 2, 2010).
- 925. "Thoughts on Pension Committee of the University of Montreal Pension Plan v. Banc of America Securities, LLC, Working with Clients on Implementing Legal Holds, and Other Topics," with Browning E. Marean III and Tom O'Connor, e-Discovery Zone Video sponsored by TechLaw Solutions in Connection with LegalTech New York 2010 (New York, NY Feb. 3, 2010).
- 926. "Cloud Computing & Web 2.0: Discovery Challenges for Lawyers," with Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (Feb. 12, 2010).
- 927. "Triggers,' Preservation, and Search; Form of Production; Accessible / Not Reasonably Accessible Information; Privilege and Federal Rule of Evidence 502," Guest Lecturer at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC Feb. 13, 2010).
- 928. "Current Trends in Search & Retrieval and Best Practices in Project Management," Presentation at AlphaLit Corporate Headquarters (Huntington Valley, PA Feb. 19, 2010).
- 929. "Ethics in the Electronic Age for New York State Court Attorneys," at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (Uniondale, NY Feb. 23, 2010).
- 930. "Roundtable on Ethics and Electronic Evidence," Guest Lecturer with William P. Butterfield, Patrick L. Oot, and Jeane A. Thomas, at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC Feb. 27, 2010).
- 931. "Judge Scheindlin revisits Zubulake: Assessing the Impact of Pension Committee v. Banc of America Securities LLC, with Kevin F. Brady, Hon. Paul W. Grimm, and Hon. Ronald J. Hedges, Bureau of National Affairs ("BNA") Audioconference (Mar. 2, 2010).
- 932. "Ethics in the Electronic Age for New York State Court Attorneys," with Jeremy R. Feinberg, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (Uniondale, NY Mar. 3, 2010).
- 933. "Mapping Out the Steps to the E-Discovery Process," with Kevin F. Brady, at the Georgetown University Law Center E-Discovery Training Academy (Washington, DC Mar. 8, 2010).
- 934. "The Keys to eDiscovery Project Management," with Scott W. Merrick, LDM Global Webinar (Mar. 11, 2010).
- 935. "It's 2010, Do You Know Where Your Records Are: The Status of Search & Retrieval and the Role of Records & Information Management in eDiscovery," at the American Records Management Association (ARMA) 2010 MetroNYC Educational Workshop (New York, NY Mar. 18, 2010).

- 936. "E-Discovery in 2010," Guest Lecturer with Hon. Ronald J. Hedges, at Adam I. Cohen's and Steven C. Bennett's Fordham University School of Law Electronic Discovery Course (New York, NY Mar. 22, 2010).
- 937. "Real World Ethical Issues," with Jeremy R. Feinberg, Hon. James C. Francis IV, Pery D. Krinsky, and Laura Smith, at the Association of the Bar of the City of New York (New York, NY Mar. 25, 2010).
- 938. "Special Masters for E-Discovery Management and Dispute Resolution," with Hon. Richard A. Levie, Hon. Shira A. Scheindlin, and Kenneth J. Withers, The Sedona Conference Voices From the Desert Webinar Series (Apr. 14, 2010).
- 939. "Rule 45 Subpoenas and Non-Party Production Issues in Electronic Discovery: Assessing the Burdens and Costs and Avoiding the Pitfalls," with Anne Marie Gibbs and Babette V.E. Orenstein, Lorman Education Services Teleconference (Apr. 20, 2010).
- 940. "Discovery 2.0," with Richard G. Braman and John H. Jessen, at the Mid-Year Meeting of The Sedona Working Group on Electronic Document Retention & Production (WG1) (Denver, CO Apr. 21, 2010).
- 941. "Ethics Surrounding the Use of E-mail, Cell Phones and Other Electronics," Continuing Legal Education ("CLE") Program for Mental Hygiene Legal Services, Second Judicial Department, Appellate Division, State of New York (White Plains, NY Apr. 27, 2010).
- 942. "2010: An E-Discovery Odyssey," with David R. Buchanan, William P. Butterfield, Adam I. Cohen, Hon. Shira A Scheindlin, and Emily Gold Waldman, co-sponsored by the Westchester Committee of the Federal Bar Council and PACE Law School (White Plains, NY Apr. 27, 2010).
- 943. "Searching for ESI in All the Wrong Places: What Every Lawyer Needs to Know About Using Search Tools in E-Discovery," with Terry Sweeney, IE Discovery, Inc. Program for Government Attorneys (Washington, DC Apr. 28, 2010).
- 944. "Ethics Surrounding the Use of E-mail, Cell Phones and Other Electronics," Continuing Legal Education ("CLE") Program for Mental Hygiene Legal Services, Second Judicial Department, Appellate Division, State of New York (Central Islip, NY May 4, 2010).
- 945. "Electronic Data in Litigation: Trends in Discovery & Ethics (ESI Quarterly Spring 2010)," with Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association ("ALI-ABA") Audio Webcast Program (May 13, 2010).
- 946. "Understanding and Managing the Risks and Costs of Electronic Discovery," with Ralph M. Levene, Continuing Legal Education ("CLE") Program at ConocoPhillips (Houston, TX May 18, 2010).
- 947. "Hot Topics in ESI Search and Retrieval," with Jason R. Baron and Brett B. Bordon, at the American Bar Association ("ABA") Section of Science & Technology Law's E-Discovery and Digital Evidence ("EDDE") Committee First Annual Electronic Discovery and Digital Evidence Practitioners' Workshop (Chicago, IL May 19, 2010).
- 948. "Lunch Hour E-Discovery Briefing: What the Advisory Committee on Civil Rules Had to Say at the 2010 Conference on Civil Litigation," with Hon. John M. Facciola, Hon. Paul W. Grimm, and Hon. Ronald J. Hedges, Bureau of National Affairs ("BNA") Audioconference (May 25, 2010).

- 949. "Direction(s) From Duke: Are There E-Discovery Rules Changes Ahead?," with William P. Butterfield, Mary Mack and Hon. David J. Waxse, Fios Webinar (June 2, 2010).
- 950. "Form of Production; Accessible / Not Reasonably Accessible Information; Cost Sharing / Shifting; Privilege and Federal Rule of Evidence 502," Guest Lecturer with Patrick L. Oot at Hon. Ronald J. Hedges' Georgetown University Law Center Introduction to Electronic Discovery and Evidence Course (Washington, DC June 6, 2010).
- 951. "Some Things You Should Know About E-Discovery," Continuing Legal Education ("CLE") Program at Wachtell, Lipton, Rosen & Katz (New York, NY June 16, 2010).
- 952. "Current Ethical Issues in Privacy & Information Security for Lawyers," at Practicing law Institute's ("PLI's") Eleventh Annual Privacy and Security Law Institute (New York, NY June 22, 2010).
- 953. "Legal Ethics Issues in Cloud Computing," with Jeremy R. Feinberg, at Practicing Law Institute's ("PLI's") Cloud Computing 2010: Is Your Company Ready? (San Francisco, CA June 23, 2010).
- 954. "What Keeps Me Up at Night and What Drives Me Crazy About E-Discovery," with Hon. Gail A. Andler, Carmen Oveissi Field, Hon. Elizabeth D. Laporte, and Tami S. Smason, Panel Sponsored by Women in eDiscovery at LegalTech West Coast 2010 (Los Angeles, CA June 24, 2010).
- 955. "Reducing Litigation Costs," with Patrick L. Oot, at LegalTech West Coast 2010 (Los Angeles, CA June 24, 2010)
- 956. "Deal with the Challenges of Litigation Holds: Pension Committee and Progeny," with Annie Goranson, Robert D. Owen and Farrah Pepper, at The Executive Counsel Institute's E-Discovery for the Corporate Market: Controlling Your E-Discovery Destiny (New York, NY July 12, 2010).
- 957. "Select and Develop the Right Relationships and Tools," with Lynn Mestel and Adam Rubinger, at The Executive Counsel Institute's E-Discovery for the Corporate Market: Controlling Your E-Discovery Destiny (New York, NY July 13, 2010).
- 958. "Rights of Public and Private Sector Employees in the Electronic Age: Lessons from Quon and Stengart," with Kevin F. Brady and Hon. Ronald J. Hedges, Bureau of National Affairs ("BNA") Audioconference (July 14, 2010).
- 959. "The State of Search in 2010 A Roundtable Discussion with the Bench, Bar, and Experts," with Hon. Paul W. Grimm, Bruce Hedin, and Kenneth J. Withers, Webinar sponsored by H5 (July 19, 2010).
- 960. "E-Discovery for New York State Judges," with Hon. James C. Francis IV, Video Broadcast in conjunction with the 2010 Judicial Summer Seminars of the New York State Judicial Institute (July 23, 2010)
- 961. "This Really Happened: A Review of Real World Ethical Issues 2010," with Hon. Sheila Abdus-Salaam, Jeremy R. Feinberg, Pery D. Krinsky, and Daniel Weitz, at Practicing Law Institute ("PLI") (New York, NY July 28, 2010).
- 962. "Managing Against Security Risks and Embracing the Marketing Opportunities: Systems, Protocols, Contracts, and Other Useful Tools," with Woods K. Abbott, Andy Grover, Kevin R. Haley, and Joel

- Wuesthoff, Conference on Data Security and Management in Global Commerce sponsored by the Center for Law & Innovation of the University of Maine School of Law (Portland, ME Aug. 5, 2010).
- 963. "The Digital Revolution and e-Discovery Transforming the Legal Profession," with Hon. John M. Facciola, Lucy L. Thompson, Richard L. Marcus, and Stephanie Mendelsohn, Presidential CLE Centre Showcase Program sponsored by the Section of Science & Technology Law of the American Bar Association ("ABA"), at the ABA 2010 Annual Meeting (San Francisco, CA Aug. 7, 2010).
- 964. "Electronic Data in Litigation: Trends and Developments (ESI Quarterly Fall 2010)," with Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association (ALI-ABA) Audio Webcast Program (Sept. 14, 2010).
- 965. "Pre-Litigation Strategies: Creating an E-Discovery Preparedness Plan," with Thomas Y. Allman and Joel M. Mitnick, at the Practicing Law Institute's ("PLI's") Electronic Discovery Guidance 2010: What Corporate and Outside Counsel Need to Know (New York, NY Sept. 20, 2010).
- 966. "Understanding and Managing the Risks and Costs of Electronic Discovery," with John F. Savarese, Continuing Legal Education ("CLE") Program at UBS (Stamford, CT Sept. 23, 2010).
- 967. "Search Technologies: What These Are, What are the Costs, and What is "Reasonable?" with Hon. Paul W. Grimm and Kenneth J. Withers, at the Federal Judicial Center 2010 E-Discovery Seminar for Federal Judges (Washington, DC. Sept. 27, 2010).
- 968. "Form of Production," with Hon. James C. Francis IV and Hon. Frank S. Maas, at the Federal Judicial Center 2010 E-Discovery Seminar for Federal Judges (Washington, DC Sept. 28, 2010).
- 969. "Rule 502, Privilege, and Work Product," with Hon. Paul W. Grimm and Kenneth J. Withers, at the Federal Judicial Center 2010 E-Discovery Seminar for Federal Judges (Washington, DC Sept. 28, 2010).
- 970. "Practitioners' Panel," with William P. Butterfield, Adam C. Losey, and Hon. Barbara J. Rothstein, at the Federal Judicial Center 2010 E-Discovery Seminar for Federal Judges (Washington, DC Sept. 29, 2010).
- 971. "Discovery 2.0," with Richard G. Braman, Derek G. Howard, John H. Jessen, and Jennifer Kneadle Mason, at the 2010 Annual Meeting of The Sedona Conference Working Group on Document Retention & Production (Paradise Valley, AZ Oct. 7, 2010).
- 972. "Rule 45 Subpoenas and Non-Party Production Issues in Electronic Discovery: Assessing the Burdens and Costs and Avoiding the Pitfalls," with Anne Marie Gibbs and Babette V.E. Orenstein, Lorman Education Services Teleconference (Oct. 12, 2010).
- 973. "The Slippery Slope From Preservation to Sanctions: A Review of 2010's Major E-Discovery Cases From Pension Committee Through Victor Stanley, with Kevin F. Brady, Hon. Paul W. Grimm, Hon. Ronald J. Hedges, and Jeane A. Thomas, Bureau of National Affairs ("BNA") Audioconference (Oct. 13, 2010).
- 974. "An Introduction to Electronic Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton, Rosen & Katz (New York, NY Oct. 14, 2010).
- 975. "A Short Course in E-Discovery for Judges," with Craig Ball and Hon. Shira A. Scheindlin, at the Delaware Fall Judicial Conference (Wilmington, DE Oct. 15, 2010).

- 976. "Honey, I Shrunk the Records: The Perils of Preservation," at the National Archives and Records Administration Southeast Region's 2010 E-Records Forum (Atlanta, GA Oct. 19, 2010).
- 977. "E-Discovery from the Bench," Guest Lecturer with Hon. Shira A. Scheindlin, at William Causey's and Peter Gronvall's Georgetown University Law Center Electronic Discovery Seminar (Washington, DC Oct. 19, 2010).
- 978. "How to Successfully Manage Your E-Discovery Matter: Project Management 101," with David K. Gaston, Patrick McColloch, and Leslie Wharton, at IE Discovery's Third Annual Electronic Discovery Symposium for Governmental Agencies (Washington, DC Oct. 20, 2010).
- 979. "Cost Containment: Preservation Techniques for Litigation," with Jason R. Baron and Jennifer Mason, American Records Management Association ("ARMA") International Webinar (Oct. 25, 2010).
- 980. "Understanding and Managing the Risks and Costs of Electronic Discovery," with Ralph M. Levene, Continuing Legal Education ("CLE") Program at UBS (Weehawken, NJ Oct. 26, 2010).
- 981. "Rule 45 Subpoenas and Non-Party Production Issues in Electronic Discovery: Assessing the Burdens and Costs and Avoiding the Pitfalls," with Anne Marie Gibbs and Babette V.E. Orenstein, Lorman Education Services Teleconference (Oct. 28, 2010).
- 982. "An Introduction to Electronic Discovery," Guest Lecturer with Adam I. Cohen at Emily Gold Waldman's Pace Law School Civil Procedure 1 Course (New York, NY Nov. 1, 2010).
- 983. "Ethics and the Use of Technology," Guest Lecturer at Jeremy R. Feinberg's Columbia Law School Professional Responsibility Course (New York, NY Nov. 1, 2010).
- 984. "Achieving Proportionality in Search," with Jason R. Baron, Hon. Paul W. Grimm, and Ralph C. Losey, at Capital One's Second Annual Seminar on Moving Towards Proportionality in E-Discovery (McLean, VA Nov. 3, 2010).
- 985. "Achieving Proportionality in the Government/Regulatory Context," with Hon. John M. Facciola, Andrew D. Goldsmith, Tracy Greer, and John Woods, at Capital One's Second Annual Seminar on Moving Towards Proportionality in E-Discovery (McLean, VA Nov. 3, 2010).
- 986. "TREC Legal Track 2009 Results & 2010 Update," with Jason R. Baron, at the Birds of a Feather Gathering re: Achieving Quality in E-Discovery Searches (San Francisco, CA Nov. 5, 2010).
- 987. "You Say, 'Toe-May-Toe,' and I Say, 'Toe-Mah-Toe': Differences in How Records Managers and Lawyers Use Search Technology to Accomplish Their Goals," with Terry Sweeney, at the American Records Management Association ("ARMA") International / International Legal Technology Association ("ILTA") Legal Information Technology Conference 2010 ("Lit-Con 2010") on Mitigating Risk and Maximizing Revenues with Information Governance (San Francisco, CA Nov. 6, 2010).
- 988. "Cost Containment: Preservation Techniques for Litigation," with Jason R. Baron and Jennifer Mason, at the American Records Management Association International (ARMA International) 55th Annual Conference & Expo (San Francisco, CA Nov. 7, 2010).

- 989. "An Introduction to Electronic Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton, Rosen & Katz (New York, NY Nov. 11, 2010).
- 990. "TREC 2010 Legal Track Overview," with Bruce Hedin, at the National Institute of Standards and Technology's ("NIST's") TREC 2010 Conference (Gaithersburg, MD Nov. 17, 2010).
- 991. "Ethics Game Show: Some Real World 'E-thical' Issues," with Hon. John M. Facciola, Hon. James C. Francis IV, and Hon. Paul W. Grimm, at the Georgetown University Law Center's Eighth Annual Advanced E-Discovery Institute (Crystal City, VA Nov. 19, 2010).
- 992. "Cloud & Web Computing: How Courts are Responding to New Technologies in Litigation," with Hon. Ronald J. Hedges and Jon A. Neiditz, at American Law Institute / American Bar Association ("ALI-ABA") Video Webcast (Philadelphia, PA Dec. 2, 2010).
- 993. "Frontiers of E-Discovery: What You Need to Know About Predictive Coding," with Jason R. Baron and Bennett B. Borden, Virtual LegalTech Webinar (Dec. 6, 2010).
- 994. "Some Things You Should Know About Search," at the Connecticut Chapter of Women in eDiscovery (Hartford, CT Dec. 7, 2010).
- 995. "A Judicial Training Program on Concept Search," with Karl A. Schieneman, Live Program and Webinar (New York, NY Dec. 9, 2010).
- 996. "Judicial Perspective on Concept Searching and Predictive Coding," with Chris Dale, Hon. John M Facciola, Hon. Paul W. Grimm, and Karl Schieneman, JurInnov Ltd. ESIBytes Podcast (Dec. 20, 2010).

- 997. "Complex Cases and Structured Data Discovery from an Attorney's Point of View," with Alexander Arata, Todd J. Marlin, and Babette V.E. Orenstein, at LegalTech New York 2009 (New York, NY Feb. 2, 2009).
- 998. "Buyer Beware: How TREC Can Help You Evaluate Your E-Discovery Investments," with Jason R. Baron, Dan Brassil, Douglas W. Oard, and Venkat Rangan, H5 and Clearwell Systems E-Discovery Webinar (Mar. 19, 2009).
- 999. "Current Issues in Privilege, Ethics, and Compliance," with David Gruenstein, CLE at Ziff Brothers Investments (New York, NY Mar. 23, 2009).
- 1000. "Achieving Quality in the E-Discovery Process," with Jason R. Baron, Macyl A. Burke, Kenneth J. Withers, and Joe Looby, The Sedona Conference Voices From the Desert Webinar Series (Mar. 20, 2009).
- 1001. "Ethical Aspects of Privacy and Information Security for Lawyers," at Practicing Law Institute's ("PLI's") Tenth Annual Institute on Privacy & Security Law (New York, NY June 23, 2009).
- 1002. "A Primer on Electronic Discovery for Ziff Brothers Investments, LLC," CLE at Ziff Brothers Investments, LLC (New York, NY June 25, 2009).

- 1003. "Ethics: Professional Obligations in eDiscovery, Part I," with Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute /American Bar Association ("ALI-ABA") Audio Webcast Program (June 30, 2009).
- 1004. "An Introduction to Electronic Discovery for New York State Court Attorneys," with Jeremy R. Feinberg, Program sponsored by the State Court Counsel Committee for the State Bar (New York, NY July 15, 2009).
- 1005. "Multiple Representation, Privilege, and Ethical Issues in Legal Practice Today," with Evan J. Farber and David Gruenstein, CLE at Ziff Brothers Investments, LLC (New York, NY July 16, 2009).
- 1006. "This Really Happened: A Review of Real World Ethical Issues 2009," with Hon. Sheila Abdus-Salaam, Jeremy R. Feinberg, Pery D. Krinsky, and Paul D. Sarkozi, at Practicing Law Institute ("PLI") (New York, NY July 29, 2009).
- 1007. "Search Tools and Filtering Technologies," with Jason R. Baron and Herbert L. Roitblat, at the Georgetown University Law Center E-Discovery Training Academy (Washington, DC Aug. 4, 2009).
- 1008. "Ethics and E-Discovery Roundtable," with Hon. Ronald J. Hedges and Browning E. Marean III, at the 2009 International Legal Technology Association Conference: Leading Technology / Optimizing Value ("ILTA '09") (National Harbor, MD Aug. 26, 2009).
- 1009. "An Introduction to Electronic Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton Rosen & Katz (New York, NY Sept. 17, 2009).
- 1010. "Technology Solutions to Information Management Problems: Increasing Efficiency and Reducing Costs Through the Use of Emerging Data Management Applications and Advanced Search Tools," with Jason R. Baron and Ronni D. Solomon, at the American Conference Institute's 7th Annual Advanced Forum on Document Management & E-Discovery (Philadelphia, PA Sept. 22, 2009).
- 1011. "Document Review," with Richard G. Braman and Joseph P. Guglielmo, at The Sedona Conference Working Group on Electronic Document Retention & Production 2009 Annual Meeting (Atlanta, GA Oct. 2, 2009).
- 1012. "Pre-Litigation Strategies: Putting Technology in Your Corner," with Ashish S. Prasad, at Practicing Law Institute's ("PLI's") Electronic Discovery Guidance 2009: What Corporate and Outside Counsel Need to Know (New York, N.Y. Oct. 6, 2009).
- 1013. "The View From the Other Side of the Table: How to Get What You Want From the Meet-and-Confer (or its Equivalent) Without Shooting Yourself in the Foot," with Andrew D. Goldsmith, at IE Discovery's Second Annual Electronic Discovery Symposium for Governmental Agencies (Washington, DC Oct. 6, 2009)
- 1014. "Sedona Conference Update: Achieving Quality in the E-Discovery Process," with Thomas Y. Allman, and Jason R. Baron, and Mary Mack, Fios Inc. Webcast (Oct. 7, 2009).
- 1015. "International Disclosure and Privacy: Minimize Risk and Maximize Compliance," with E. Regan Adams, Alexandra E. Chopin, Conor R. Crowley, and Thomas F. Matzen, at the Masters Conference for Legal Professionals Global Corporate Change: Navigating Discovery, Risk, and Security (Washington, DC Oct. 13, 2009).

- 1016. "A Real-World View of E-Discovery from Outside Counsel's Perspective," Guest Lecturer at Joel Wuesthoff's University of Maine Law School e-Discovery and Forensics Course (Portland, ME Oct. 19, 2009).
- 1017. "This Really Happened: A Review of Real World Ethical Issues 2009," with Jeremy R. Feinberg, Paul I. Marx, Edward Mevec, and Deborah A. Scalise, at the Westchester County Bar Association (Yonkers, NY Oct. 20, 2009).
- 1018. "This Really Happened: A Review of Real World Ethical Issues 2009 for New York State Court Attorneys," with Jeremy R. Feinberg, Michael Klein, Melissa Nickson, and David Tennant, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (Rochester, NY Oct. 28, 2009).
- 1019. "Ethics in the Electronic Age for New York State Court Attorneys," with Jeremy R. Feinberg, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (Rochester, NY Oct. 28, 2009).
- 1020. "What Does it Take to Achieve a Quality E-Discovery Process?: Using Sampling, Metrics and Other Methods," with Jason R. Baron, Alexandra E. Chopin, and David Lasater, at Capital One Financial Corporation's First Annual Seminar on E-Discovery: The Future of Search (McLean, VA Nov. 10, 2009).
- 1021. "Advanced Search and Retrieval Technology," with Jason R. Baron, Ralph C. Losey, and Ellen Voorhees, at The Georgetown University Law Center Advanced E-Discovery Institute 2009 (Washington, DC Nov. 13, 2009).
- 1022. "Ethics: Professional Obligations in eDiscovery, Part II," with Hon. Ronald J. Hedges and Jeane A. Thomas, American Law Institute / American Bar Association (AL-ABA) Audio Webcast Program (Nov. 16, 2009).
- 1023. "An Introduction to Electronic Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton, Rosen & Katz (New York, NY Nov. 18, 2009).
- 1024. "What Would You Do? The Ethics Game Show," with Jeremy R. Feinberg, Hon. Ira S. Warshawsky, Peter A. Zablotsky, and Hon. Hope S. Zimmerman, at the Nassau County Bar Association (Mineola, NY Nov. 19, 2009).
- 1025. "An Update on Legal and Ethical Issues Involving Metadata, Social Networking, and Electronic Discovery," CLE at Ziff Brothers Investments, LLC, (New York, NY Nov. 30, 2009).
- 1026. "This Really Happened: A Review of Real World Ethical Issues 2009 for New York State Court Attorneys," with Maryita Dobiel, Jeremy R. Feinberg, and Joanne Haelen, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute (Saratoga, NY Dec. 1, 2009).
- 1027. "Ethics in the Electronic Age for New York State Court Attorneys," with Jeremy R. Feinberg, at the 2009/2010 Legal Update Program sponsored by the New York State Judicial Institute, (Saratoga, NY Dec. 1, 2009).
- 1028. "Criminalization of Spoliation: Answers to the Questions That Keep You Up at Night," with Patrick J. Burke, Andrew D. Goldsmith, Hon. Andrew J. Peck, and Steven P. Solow, at the International Quality

- and Productivity Center (IQPC) 8th Annual eDiscovery Conference (New York, NY Dec. 8, 2009).
- 1029. "Cross Border E-Discovery: Managing the Risks and Challenges," with E. Regan Adams and Alysia A. Solow, at the New York City Chapter of Women in eDiscovery, (New York, NY Dec. 17, 2009).
- 1030. "The Case for Cooperation in E-Discovery," with William P. Butterfield, Hon. Andrew J. Peck, and Karl A. Schieneman, JurInnov Ltd. Podcast (Dec. 21, 2009).

- 1031. "Commentary on Achieving Quality Control Over the E-Discovery Process: A Primer on Project Management, Methods & Metrics Version 3.0," with Jason R. Baron, Macyl A. Burke, and Thomas P. Wisnowski, at the 2008 Mid-Year Meeting of The Sedona Conference Working Group on Electronic Document Retention & Production (New Orleans, LA May 15, 2008).
- 1032. "Practicing What We Preach: Current Issues in Information Management, Legal Practice & Legal Ethics," at Practicing law Institute's ("PLI's") Ninth Annual Institute on Privacy & Security Law (New York, NY June 24, 2008).
- 1033. "An Introduction to Electronic Discovery for New York State Judicial Officers," with John Vagelatos, at the 2008 Judicial Summer Seminars of the New York State Judicial Institute (Rye Brook, NY June 26, 2008).
- 1034. "An Introduction to Electronic Discovery for New York State Judicial Officers," with Jeremy R. Feinberg, at the 2008 Judicial Summer Seminars of the New York State Judicial Institute (Rye Brook, NY July 10, 2008).
- 1035. "An Introduction to Electronic Discovery for New York State Judicial Officers," with Jeremy R. Feinberg, at the 2008 Judicial Summer Seminars of the New York State Judicial Institute (Rye Brook, NY Aug. 28, 2008).
- 1036. "Native Review and Production," at the Kroll Ontrack 2008 E-Discovery Certification Course (Eden Prairie, MN Sept. 12, 2008).
- 1037. "An Introduction to E-Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton, Rosen & Katz (New York, NY Sept. 23, 2008,).
- 1038. "An Introduction to E-Discovery for New Associates," with Luis A. McNish, at Wachtell, Lipton, Rosen & Katz (New York, NY Oct. 14, 2008).
- 1039. "Significant Ethical Issues Facing Inside Counsel: What In-House Counsel & Those Who Advise Them Need to Know," with Paul Dutka, Jeremy R. Feinberg, and James W. Paul, at The Association of the Bar of the City of New York (New York, NY Oct. 15, 2008).
- 1040. "Managing eDiscovery Risk While Driving Productivity and Reducing Costs" with Michael Patrick Sugrue, Andreae M. Selleck, and Emily Stapf, at the Masters Conference for Legal Professionals (Washington, DC Oct. 16, 2008).
- 1041. "Discovery Disputes: Addressing the Complex Obligations of e-Discovery," with Gary A. Adler, David M. Greenwald, and Ashish S. Prasad, at Practicing law Institute's ("PLI's") Electronic Discovery and Retention Guidance for Corporate Counsel 2008 Program (New York, NY Nov. 5, 2008).

- 1042. "A Primer on Electronic Discovery for the Suffolk County Bar Association / Suffolk Academy of Law," with Jeremy R. Feinberg (Hauppauge, NY Nov. 6, 2008).
- 1043. "Draft Toolkit for Volunteer Mediators / How to Roll Out a Court-Annexed eDiscovery ADR Program," with Matthew I. Cohen and Sonya L. Sigler, at the 2008 Annual Meeting of The Sedona Conference Working Group on Electronic Document Retention & Production (Rancho Mirage, CA Nov. 14, 2008).
- 1044. "A Brief Discussion of the 2008 TREC Legal Track," with Jason R. Baron, at H5 Cocktails and Dinner in connection with the Georgetown University Law Center Advanced E-Discovery Institute (Washington, DC Nov. 19, 2008).
- 1045. "Colloquium on the Future of Commercial Litigation in New York: Developing a Cost-Efficient Judicial Process for the Electronic Age," Moderator of the morning session with Thomas Y. Allman, James M. Bergin, Hon. John L. Carroll, Hon. Elizabeth Hazlitt Emerson, and Kenneth J, Withers, sponsored by the New York State Judicial Institute at The Association of the Bar of the City of New York (New York, NY, Dec. 1, 2008).
- 1046. "Finding a Better Way to Search: Benchmarking E-Discovery Methods," with Jason R. Baron, Robert S. Bauer, Julia Brickell, and Hon. Paul W. Grimm, H5 Webinar (Dec. 10, 2008).
- 1047. "A Primer on Electronic Discovery for the Departmental Disciplinary and Policy Committees of the New York Supreme Court, Appellate Division, First and Second Judicial Departments," with Jeremy R. Feinberg (New York, NY, Dec. 11, 2008).

# EXHIBIT B

# FOR THE NORTHERN DISTRICT OF ILLINOIS EASTERN DIVISION

IN RE BROILER CHICKEN ANTITRUST LITIGATION

This Document Relates To: All Actions

Case No. 1:16-cy-08637

ORDER REGARDING SEARCH METHODOLOGY FOR ELECTRONICALLY STORED INFORMATION

This Order Regarding Search Methodology for Electronically Stored Information ("Search Methodology Order") shall govern the Parties in the above-captioned case whether they currently are involved or become so in the future, and any related actions that may later be consolidated with this case (collectively, the "Litigation").

#### I. DOCUMENT SOURCE DISCLOSURES

A. <u>Transparency</u>: With the goal of permitting requesting Parties an appropriate level of transparency into a producing Party's electronic search process, without micromanaging how the producing Party meets its discovery obligations and without requiring the disclosure of attorney work product or other privileged information, the Parties will endeavor to be reasonably transparent regarding the universe of documents subject to targeted collections or culling via search terms and/or TAR/CAL.

# B. <u>Pre-Search Deduplication & Culling of Collected Data:</u>

- 1. **De-Duplication:** Before running either of the Search Processes below in ¶ II, data should be de-duplicated by hash value across all agreed or Courtordered document custodians.
- 2. **Email Threading:** If the producing Party's search software has the capability, then the producing Party may choose to only include inclusive emails in the data set subject to the Keyword and/or TAR/CAL Search Process, including the data set against which keyword searches are tested. A producing Party will disclose whether or not they are testing search terms in a set of data that excludes non-inclusive emails. Non-inclusive emails do not need to be searched, reviewed, or produced in this matter. *See* ESI Protocol, Dkt. 459, ¶ IV(D)(1).
- 3. **Email Domains:** Should the requesting Party want certain email domains excluded from the data set against which search terms are tested, the

requesting Party must provide a list of such domain names to the producing Party ahead of the producing Party's testing of search terms. Likewise, if the producing Party identifies domains that it believes should be eliminated, it will produce a list of those domain names to the requesting Party. See ESI Protocol, ¶IV(D)(2). Plaintiffs' analysis to date of the Florida AG productions made by certain Defendants indicates there are a large variety of industry email newsletters that can be culled (i.e., excluded from a Defendant's review and production of documents) where there are no internal forwards of such documents after their receipt. Plaintiffs agree to provide a list of these domain names prior to Defendants undertaking a search of their data.

- 4. **Targeted Collections:** Only documents a producing Party intends to subject to electronic searching parameters should be included in the data set against which search terms are tested. As an example, a centralized, non-custodial folder of responsive Agri Stats reports that a party intends to produce in its entirety (to the extent not privileged) should not be included in the data set against which search terms are tested.
- 5. **Exception Reporting:** For any documents not otherwise identified as system or operating files, the producing Party must disclose processing exceptions that are unresolved at the end of the discovery period, such as documents that cannot be opened due to encryption or other issues.
- 6. **Disclosure of Other Culling Parameters Required:** A producing Party is permitted to cull data using the agreed-upon custodial and non-custodial sources, agreed-upon date parameters, and agreed-upon search terms (if applicable), and a producing Party is permitted to remove known system or operating files, such as those that appear on the National Software Reference Library (NSRL) hash list. As such, the Parties may cull entire file directories from computer hard drives that contain Program Files, Program Data, SWTOOLs, Windows Operating System files, etc. For those excluded directories, the Parties will only conduct searches on user-created content that is reviewable and likely to yield relevant content. To the extent a producing Party elects to use additional culling parameters, those parameters will be disclosed.

#### II. <u>SEARCH METHODS</u>

The following TAR/CAL and Keyword Search Processes govern how collected data may be electronically culled in this matter.

# A. <u>TAR/CAL Search Process</u>:

- 1. Use of Search Terms with TAR/CAL:
  - a. No later than December 22, 2017, the requesting Party will propose to a producing Party a limited number of Document

Custodians for whom, across their email only, it requests that no search term pre-culling be used prior to applying TAR/CAL during the review process. However, the other data culling parameters described in  $\P$  I(B) may be applied to these Document Custodians, including to their email.

b. No later than January 12, 2018, the Parties will meet and confer on any issues or disputes regarding the requesting Party's proposals.

### 2. Producing Party TAR/CAL Disclosures:

a. No later than January 19, 2018, a producing Party that elects to use TAR/CAL will disclose the following information regarding its use of a TAR/CAL process: (a) the name of the TAR/CAL software and vendor, (b) a general description of how the producing Party's TAR/CAL process will work, including how it will train the algorithm, such as using exemplars, keyword search strings, or some other method, (c) a general description of the categories or sources of the documents included or excluded from the TAR/CAL process, and (d) what quality control measures will be taken.

#### 3. Requesting Party Response:

- a. Within 7 days of receiving a producing Party's TAR/CAL Disclosures, the requesting Party may raise with the producing Party any concerns with the proposed TAR/CAL process or categories of documents that it proposes should be excluded from the TAR/CAL process. A requesting Party may also propose any exemplars it proposes be used to train a TAR/CAL tool or narrow keyword search strings it proposes be used to generate exemplars to train a TAR/CAL tool. A producing Party retains the right to reject and oppose any such requests, subject to resolution by the Special Master and/or the Court.
- 4. Cooperation: The Parties agree to work together in good faith to resolve any differences that they may have over the producing Party's use of TAR/CAL and its processes, recall, and validation proposals. If an agreement cannot be timely reached, then the Parties agree to raise this issue with the Special Master and to follow her direction absent the showing of good cause to the contrary, and subject to the Parties' rights to petition the Court for review of or relief from any decision or guidance provided by the Special Master.

# B. **Keyword Search Process:**

1. **Iterative Process:** Developing efficient keyword search terms is an iterative process and will require transparent and cooperative efforts by both the producing and requesting Party; however, it is important to set

- certain limits in order to effectively and efficiently manage time and expense.
- 2. **Search Software Disclosures:** No later than January 12, 2018, the producing Parties will disclose any search software they have decided to use (including version number) and that software's default stop/noise words and search language syntax. Additionally, the Parties should use best efforts to disclose information that answers these questions regarding their search tool:
  - a. What stop words have been excluded from the index (if different than the default stop words for the tool)?
  - b. Can searches be constrained by upper- and lowercase?
  - c. Can numbers and single letters be searched?
  - d. Are there characters that cannot be searched or are treated as spaces or ignored?
  - e. How are diacritics resolved?
  - f. Can searches be run on metadata fields?
  - g. Are proximity-limited search terms subject to an evaluation order, e.g., will terms structured X w/5 Y yield hits if the text reads Y w/5 X?
  - h. Does the tool offer synonym searching?
  - i. How does the tool account for common misspellings?

#### 3. First Phase Search Term Proposals:

- a. Producing Party Proposes an Initial Set of Search Terms: No later than January 19, 2018, the producing Party will propose a set of search terms. The producing Party's proposal will include, to the extent known, semantic synonyms and common spellings of the keywords proposed. Where a producing Party seeks to exclude false positives (aka, "noise hits") by modifying or excluding certain keywords, then it will supply contextual examples of such false positives to explain why they must be excluded.
- b. Requesting Party's Proposed Revisions: Within 12 days of receiving the initial proposed search terms, the requesting Party will provide any proposed revisions to the producing Party's search terms.

- c. Producing Party Provides Information Sufficient to Support Its Objections: Within 8 days of receipt of the requesting Party's proposed revisions, the producing Party will provide information sufficient to support its objections to specific search terms, which could include, for example, estimates of the incremental number of false positive hits and the incremental number of true positive hits introduced by the disputed search terms, as well as examples of the false positive hits.
- d. Cooperation: The producing Party and the requesting Party will work together in good faith to reasonably narrow the number of documents returned via search term hits and narrow the number of irrelevant documents captured as a result of the search terms. To the extent any disputes remain concerning the sufficiency of the producing Party's information in support of its objections and/or the use of specific search terms after good faith negotiations have occurred, either Party may request the assistance of the Special Master in resolving such disputes.

#### 4. Second Phase Search Term Proposals:

- a. Requesting Party Proposes an Additional Set of Search Terms: The Parties agree that Plaintiffs collectively and Defendants collectively may propose additional search terms to a producing Party one time. No later than May 14, 2018 (60 days after the Court-ordered March 15, 2018 deadline for "Rolling Production of Documents, Prioritizing Custodians as Agreed by the Parties or Ordered by the Court" (Dkt. 574)), the requesting Party may propose a set of additional search terms. The requesting Party will explain generally the basis for the additional requested terms, which could include, for example, identifying by Bates number exemplar documents that support the request.
- b. Producing Party Provides Information Sufficient to Support Its Objections: No later than 10 days after the requesting Party provides an additional set of proposed search terms, the producing Party will provide information sufficient to support its objections to specific additional search terms, which could include, for example, estimates of the incremental number of false positive hits and the incremental number of true positive hits introduced by the disputed additional search terms, as well as examples of the false positive hits.
- c. Requesting Party and Producing Party Will Meet and Confer Regarding Requesting Party's Proposed Additional Search Terms:

  No later than 15 days after the requesting Party proposes an additional set of search terms, the Parties will meet and confer

regarding any disputes or counter-proposals regarding the additional search terms. To the extent any disputes remain concerning the sufficiency of the producing Party's information in support of its objections and/or the use of specific additional search terms after good faith negotiations have occurred, either Party may request the assistance of the Special Master in resolving such disputes.

d. Good Cause Inability of a Party to Meet the Deadlines Imposed in this Order: While it is expected that the Parties shall make their best efforts to comply with the deadlines set forth in this Order, it is conceivable that technical (or other) issues or unanticipated volumes may interfere with a Parties' best efforts to comply. Should a Party anticipate that for good cause it may be unable to meet a deadline set forth in this Order, the Party shall promptly raise the issue with the other Parties, explain the reason for the inability to timely comply, and negotiate a reasonable extension for compliance. If the Parties are unable to immediately agree upon a revised deadline for compliance, they shall promptly raise the issue with the Special Master or the Court for resolution. This provision shall not be construed as blanket permission for a Party to modify or extend the deadlines agreed to by the Parties and set forth in this Order without good cause, but rather, to recognize that when dealing with search and review of large volumes of electronically stored information, there are sometimes legitimate, unanticipated challenges that may interfere with a Party's best efforts to fulfill its obligations and therefore, to afford the Parties reasonable flexibility and mutual accommodation should such eventuality occur.

# III. VALIDATION PROTOCOL

- A. The review process should incorporate quality-control and quality-assurance procedures to ensure a reasonable production consistent with the requirements of Federal Rule of Civil Procedure 26(g). Once a producing Party reasonably believes that it has produced or identified for production substantially all responsive non-privileged documents, it shall conduct validation according to the sampling protocol described below and in Appendix A. This Validation Protocol shall apply to the review process regardless of whether technology-assisted review ("TAR") or exhaustive manual review ("manual review") was used by the producing Party.
- B. The Document Collection ("Collection") is defined as including all documents identified for review for responsiveness and/or privilege following the application of keywords or other culling criteria. This Validation Protocol assumes that the completeness or adequacy of the Collection has already been established. For purposes of the three putative plaintiff classes' validation requirements under this

Validation Protocol, the Collection refers to the combined set of documents of a particular proposed class of plaintiffs, rather than to each individual named representative of a particular class of plaintiffs.

- C. The Collection shall be partitioned into the following two or three Subcollections, for manual review or for TAR processes, respectively:
  - 1. Documents identified by the review as responsive to at least one Request for Production, including any privileged documents, but not including family members of responsive documents, unless those family members are deemed to be responsive in their own right ("Subcollection C(1)");
  - 2. Documents coded as non-responsive <u>by a human reviewer</u>, regardless of how the documents were selected for review (e.g., by TAR, manual review, or otherwise) ("Subcollection C(2)");
  - 3. Documents excluded from manual review as the result of a TAR process ("Subcollection C(3)"). If the review process involved only manual review and no TAR, the Collection will not include Subcollection C(3).
- D. A sample shall be drawn consisting of the following:
  - 1. 500 documents selected at random from Subcollection C(1) ("Subsample D(1)");
  - 2. 500 documents selected at random from Subcollection C(2), if TAR was used, otherwise 2,500 documents selected at random from Subcollection C(2), if manual review was used ("Subsample D(2)");
  - 3. 2,000 documents selected at random from Subcollection 1(c) if TAR was used ("Sample D(3)"). If TAR was not used, there will be no Subsample D(3).
- E. Should a producing Party believe that the sample sizes specified in Paragraph III(D) would be disproportionate or unduly burdensome under the circumstances, that Party shall promptly raise the issue with the requesting Party. To the extent a dispute remains concerning the sample sizes to be used after good faith negotiations have occurred, either Party may request the assistance of the Special Master in resolving such dispute.
- F. The sample of 3,000 documents comprised of the documents from Subsamples D(1), D(2), and, if TAR was used, D(3), shall be combined into a single Validation Sample, with no indication of the Subcollection from which the documents were derived or how they were previously coded. The Validation Sample shall be reviewed and coded by a subject matter expert ("SME") who is knowledgeable about the subject matter of the litigation. This should be an attorney who is familiar with the RFPs and the issues in the case. During the course of the review of the Validation Sample, the SME shall not be provided

with any information concerning the Subcollection or Subsample from which any document was derived or the prior coding of any document. The intent of this requirement is to ensure that the review of the Validation Sample is blind; it does not preclude a Party from selecting as SMEs attorneys who may have had prior involvement in the original review process.

- G. Once the coding in Paragraph III(F) has been completed, the producing Party shall prepare a table listing each of the 3,000 documents in the Validation Sample. For each document, the table shall include:
  - 1. the Bates number of the document (for documents produced), or a control/identification number (for non-produced documents);
  - 2. the Subsample from which the document came (i.e., D(1), D(2), or, if TAR was used, D(3));
  - 3. the SME's responsiveness coding for the document (i.e., responsive or non-responsive);
  - 4. the SME's privilege coding for the document (i.e., privileged or not privileged). If the document is coded as non-responsive, a privilege determination need not be made. All documents in the Validation Sample coded as privileged shall be included on the producing Party's Privilege Log, as per the requirements set forth in ¶ VI of ESI Protocol (Dkt. 459).
  - 5. for putative class plaintiffs, the named class representative associated with the document.
- H. The following items shall be provided to the requesting Party and to the Special Master:
  - 1. the table described in Paragraph III(G);
  - 2. a copy of each responsive, non-privileged document in the Validation Sample that was not previously produced or identified for production to the requesting Party;
  - 3. the statistics and recall estimate detailed in Appendix A to this Order.
- I. Once the requesting Party has received and has had an opportunity to review the items described in Paragraph III(H) and Appendix A, the Parties shall meet and confer to determine whether or not the Parties agree that the recall estimate, and the quantity and nature of the responsive documents identified through the sampling process, indicate that the review is substantially complete. If the recall estimate and the samples indicate that Subcollections C(2) and/or C(3) still contain a substantial number of non-marginal, non-duplicative responsive documents as compared to Subcollection C(1), the review and quality assurance process shall continue, and the validation process shall be repeated, as warranted.

If the parties are unable to agree on whether the review is substantially complete, or whether the validation process must be repeated, the Special Master shall render a decision, subject to the Parties' rights to petition the Court for review of or relief from any decision or guidance provided by the Special Master.

SO ORDERED.

Dated: January 3, 2018 /s/ Maura R. Grossman

MAURA R. GROSSMAN SPECIAL MASTER

Dated: January 3, 2018

HON. JEFFREY T. GILBERT U.S. MAGISTRATE JUDGE

#### APPENDIX A

#### Method of Recall Estimation

An estimate of recall shall be computed to inform the decision-making process described in III(H) of the Validation Protocol; however, the absolute number in its own right shall not be dispositive of whether or not a review is substantially complete. Also of concern is the novelty and materiality (or conversely, the duplicative or marginal nature) of any responsive documents identified in Subsamples D(2) and/or D(3). The estimate of recall shall be derived as described below, depending on whether or not the review process involved the use of TAR. It should be noted that, when conducted by an SME pursuant to Paragraph III(F) of the Validation Protocol, a recall estimate on the order of 70% to 80% is consistent with, but not the sole indicator of, an adequate (i.e., high-quality) review. A recall estimate somewhat lower than this does not necessarily indicate that a review is inadequate, nor does a recall in this range or higher necessarily indicate that a review is adequate; the final determination also will depend on the quantity and nature of the documents that were missed by the review process.

# **Recall Estimation Method for a Review Process Involving TAR:**

The number of responsive documents found  $\approx$  the size of Subcollection C(1)  $\times$  the number of responsive docs in Subsample D(1)  $\div$  500.

The number of responsive documents coded incorrectly  $\approx$  the size of Subcollection C(2)  $\times$  the number of responsive documents in Subsample D(2)  $\div$  500.

<u>The number of responsive documents not reviewed</u>  $\approx$  size of Subcollection C(3)  $\times$  the number of responsive documents in Subsample D(3)  $\div$  2,000.

Estimated recall  $\approx$  the number of responsive documents found  $\div$  (the number of responsive documents found + the number of responsive documents coded incorrectly + the number of responsive documents not reviewed).

#### Recall Estimation Method for a Review Process Involving Manual Review:

The number of responsive documents found  $\approx$  the size of Subcollection C(1)  $\times$  the number of responsive documents in Subsample D(1)  $\div$  500.

The number responsive documents coded incorrectly  $\approx$  the size of Subcollection C(2)  $\times$  the number of responsive documents in Subsample D(2)  $\div$  2,500.

Estimated recall  $\approx$  the number of responsive documents found  $\div$  (the number of responsive documents found + the number of responsive documents coded incorrectly).